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ABSTRACT

This report describes how Nova University started the Ed.D. Programs for Higher Education with a focus on preparing community college personnel. The Vocational, Technical, and Occupational Education (VTO) specialization consisted of two seminars: Personnel--Human Resources Development (P-HRD) and Emergence of VTO. The program focused on preparing transformational leaders who think strategically about fundamental restructuring of establishments created in the industrial era. The seminars were offered in a format linked to the Summer Institute (SI). Students received materials and completed assignments prior to the SI, participated in SI activities that consisted of a theme and specialization sessions, and produced a synthesis paper. Related activities included workshops and practica. Following the eight-page report are these appendixes: (1) P-HRD materials, including a resource manual with readings, practicum and research project ideas, proposal development and evaluation protocols, and sources of information; (2) E-VTO materials; (3) titles of VTO and HRD practica undertaken as related activities; and (4) materials from the "Leadership for Innovation and Change" workshop. A postscript provides information on the author. The following student seminar papers by Polly Schultz are provided: "Redesign of the Education System"; "The Emergence of the Technical Society"; "Studies about Education"; Intellectual Capital Formation"; "Relevant VTO Materials"; and "Intrapreneurship in Postsecondary Education." (YLB)

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TOWARD THE 21st CENTURY: PREPARING STRATEGIC THINKERS IN VOCATIONAL, TECHNICAL, AND OCCUPATIONAL EDUCATION FOR RESTRUCTURING ESTABLISHMENTS

Cycle 1
1984 – 1985
Agents of Change

Cycle 2
1986 – 1987
Transformational Leaders

Cycle 3
1988 – 1989
Strategic Thinkers

Cycle 4
1990 – 1991
Restructuring Establishments

by

Warren H. Groff
National Lecturer
Programs for Higher Education
Nova University
August 1991

CE058736

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TOWARD THE 21ST CENTURY: PREPARING STRATEGIC THINKERS IN VOCATIONAL, TECHNICAL, AND OCCUPATIONAL EDUCATION

For Restructuring Establishments

by

Warren H. Groff, Ed.D.

Abstract

Nova University was founded in 1964. In January 1972, Nova University began to operate the first field-based doctoral program for practicing elementary- and secondary-level school administrators. That same year, the Ed.D. program in early Childhood became operational; that program was expanded to Early and Middle Childhood in 1974 and then to Child and Youth Studies in 1989.

The Ed.D. Programs for Higher Education (PHE) were started in 1972 with a focus on preparing community college personnel. That single program evolved into three areas of specialization: (a) Higher Education; (b) Adult Education; and (c) Vocational, Technical, and Occupational Education (VTO). The VTO specialization consisted of two seminars: Personnel - Human Resources Development (P-HRD) and The Emergence of Vocational, Technical, and Occupational Education (E-VTO). During the 1980s, PHE analyzed the format for the delivery of the specialization seminars. A new format was designed and implemented in 1984. The new format linked the specialization seminars to the Summer Institute. Students received materials and completed assignments prior to the SI, participated in SI activities that consist of theme and specialization sessions, and then produced a synthesis paper.

Each of the three two-year cycles is described in a paper. The 1984-1985 cycle dealt with **preparing agents of change** (ED 272 247). The 1986-1987 cycle had a focus on **preparing transformational leaders** (ED 290 860). The 1988-1989 cycle concentrated on **preparing strategic thinkers** (ED 319 882). The third cycle paper included a six year summative evaluation with recommendations for the next six years. The paper included a detailed plan for "Designing Information Age Learning Paradigms (DIALP)" and having an online option by cycle six in 1994-1995.

This paper is an analysis of Cycle 4 which consisted of P-HRD in 1990 and E-VTO in 1991. Cycle 4 focused on preparing tranformational leaders who think strategically about **fundamental restructuring** of establishments created in the industrial era.

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From Awareness To Commitment: Preparing Transformational Leaders for the 21st Century

CREATIVE ORGANIZATIONAL PROTOTYPES

> I believe that there exists a possibility for a type of organization so fundamentally more creative than the traditional, authoritarian hierarchy that it is only dimly reflected, even in the most successful, current practitioners of new management principles.

Peter Senge. Sloan School of Management, Massachusetts Institute of Technology.

* * * * * * * * * *

I. Background and Cycles 1, 2 and 3

The ultimate goal of graduate education is to design programs of preparation to promote improvement in the quality of education and training services that are provided in a variety of different contexts. In the late 1960s, Nova University developed a field-based doctoral program as a strategy to prepare individuals to become agents of change in the contexts in which they work.

The Programs in Higher Education developed field-based doctoral programs in (1) higher education; (2) adult education; and (3) vocational, technical, and occupational education. During the 1980s, the Programs for Higher Education critically analyzed the format for the delivery of the specialization seminars for the three above-named programs. A new format was designed and implemented for specialization seminars in these three programs. The new format was used for "Personnel - Human Resources Development" in 1984 and "Emergence of Vocational, Technical, and Occupational Education" in 1985. An analysis of Cycle 1 yielded a paper entitled "Preparing Agents of Change in Vocational, Technical, and Occupational Education" (ED 272 247). P-HRD was offered again in 1986 and E-VTO was offered again in 1987. An analysis of Cycle 2 yielded a paper entitled "Preparing Transformational Leaders in Vocational, Technical, and Occupational Education" (ED 290 860). Cycle 3 consisted of P-HRD in 1988 and E-VTO in 1989 and yielded a paper that included conclusions drawn from three cycles and offered comments about preparing leaders who can **think strategically** about (a) transforming contemporary traditional establishments and (b) creating entirely new caring and learning paradigms appropriate for an advanced technological era (ED 319 882).

Cycle 4 consisted of P-HRD in 1990 and E-VTO in 1991 and focused on preparing tranformational leaders who think strategically about **fundamental restructuring** of establishments created in the industrial era.

II. Personnel - Human Resources Development, 1990

A. Pre Summer Institute. Preparation for P-HRD 1990 began at the 1989 Summer Institute with the approval to allow qualified "special" students to take a VTO seminar. During the winter term each student received a cover memorandum and a Study Guide for P-HRD which included an "Overview and Contract Packet" and a "Synthesis Paper Guide." Each student negotiated a learning contract with the national lecturer for the three required and two elective units. "Prior Learning" credit was granted to nine students for one unit and "Academic Credit" was granted to seven students for participation in professional development activity; seven students received credit in both categories. Each student submitted "Personal Data Variables" and "Student Progress" sheets that were used in individual counseling sessions at the Summer Institute. Each student completed assignments and then did a one page analysis of significant concepts and their implications.

B. Summer Institute. The specialization seminar met on Sunday afternoon. Following greetings and introductions, the national lecturer reviewed the Nova philosophy, the VTO education specialization, and the P-HRD specialization seminar. Each student distributed Analysis 1 to peers.

To emphasize diversity and individualization, each student took the Kolb learning styles inventory, the Torrance hemisphericity test, and a modified Myers Briggs test. Six groups developed action plans -- business, secondary education, distant learning, engineering, health, and administration. Sunday and Monday stressed rationale, Tuesday - goals and objectives, Wednesday - methodology, Thursday - evaluation, and Friday - budget.

The theme of the Summer Institute was "Leadership For Innovation And Change." Nationally renowned speakers made presentations throughout the week on various topics related to the theme. Each student received a notebook on leadership and a P-HRD Resource Manual.

The specialization seminar met on Saturday morning and heard presentations from the six groups.

C. Synthesizing Experience. Each student integrated Analysis 1, significant concepts and implications from the papers, with Analysis 2, ideas obtained at the Summer Institute theme and specialization sessions. The synthesis papers were of high quality. Of the 43 students, 20 of the 23 1st year students passed the seminar, 11 with High Pass, and 20 of the 2nd year students passed, 10 with HP.

Appendix 1 contains P-HRD materials.

III. Emergence of VTO, 1991

A. Pre Summer Institute. During the spring term each student received a cover memorandum and a Study Guide for E-VTO which included an "Overview and Contract Packet" and a "Synthesis Paper Guide." "High Tech - High Touch Collaboration In Helping The United States To Develop 'Learning Communities of The Future'" was written especially for E-VTO 1991 and included as Appendix B in the Study Guide. Each student negotiated a learning contract with the national lecturer for three required units and one elective unit. Each student submitted "Personal Data Variables" and "Student Progress" sheets that were used in individual counseling sessions at the Summer Institute. Each student received an early June and a mid June memo intended to help guide her/him through the seminar. The mid June memo and packet asked each student to project the 1990s and contained examples of projections, visions and technology. Students were asked to bring articles to the SI. Each student completed assignments and then did a one page analysis of significant concepts and their implications and projections.

B. Summer Institute. The specialization seminar met on Sunday afternoon. Following greeting and introductions, the national lecturer reviewed the Nova University philosophy, the VTO education specialization, and the E-VTO specialization seminar. Each student distributed a copy of Analysis I and projections for the 1990s to peers.

Seven groups developed action plans -- teaching and learning, business, health, engineering, distant learning, restructuring, and outreach for community development. Sunday and Monday stressed rationale, Tuesday - goals and objectives, Wednesday - methodology, Thursday - evaluation, and Friday - budget.

The theme of the SI was "Intrapreneurship In Postsecondary Education." Keynote follow-up sessions provided an opportunity to synthesize significant concepts. Nationally renowned speakers made presentations throughout the week on various topics related to the theme.

The specialization seminar met on Saturday morning and heard presentations from each of the groups.

C. Synthesizing Experience. Each student integrated Analysis I, significant concepts and implications from the papers, with Analysis 2, ideas obtained at the Summer Institute theme and specialization sessions. The synthesis papers were of high quality. E-VTO had 18 1st year students and 16 2nd year students.

Appendix 2 contains E-VTO 1991 materials.

IV. Other Related Activities

During the 1989 Summer Institute, Dr. Ross E. Moreton designated individuals as Practicum Report Evaluators (PRE). The practicum process was modified to involve PRE in the review of practicum proposals. Of the 29 VTO practica, 12 of 16 P-HRD and 10 of 13 E-VTO projects have been completed in the two year cycle (Appendix 3).

The Higher Education Director's Team accepted a proposal to (1) shift P-HRD from a VTO specialization seminar to the core seminar Human Resources Development beginning fall 1990, (2) implement a Leadership core seminar beginning fall 1991, and (3) reduce the number of practica from five to four. As a result of the seminar changes, seven VTO students who had P-HRD in 1990 completed Leadership via directed study in 1990-91. Leadership was inserted in the term occupied by Practicum Services.

During spring of 1990, I was appointed Major Applied Research Advisor and three students were assigned to me.

Dr. Moreton asked me to develop a workshop on the 1990 Summer Institute theme "Leadership For Innovation And Change" (Appendix 4). The workshop in Ft. Lauderdale was held in January 1991 for 15 participants.

I was asked to guide the transition of P-HRD to HRD. The study guide was converted, textbooks selected, and faculty recruited. HRD was taught to seven clusters in 1990-91. I serve as HRD Curriculum Coordinator. Six of the 23 practica submitted since the first one in January 1991 have been completed (Appendix 3).

Nine employees from Mercer County Community College in Trenton, NJ, enrolled in PHE in the Philadelphia Cluster. MCCC is developing a comprehensive plan with strategic goals to which students can link practica. Additional MCCC employees will enroll in PHE. It is a wonderful opportunity to demonstrate value added to MCCC through PHE.

A Curriculum Integrity Committee comprised of Curriculum Coordinators of the six core seminars met for the first time prior to the SI to analyze seminar content.

Students can concentrate within their specialization in areas such as human resources development, educational technology, training and education, systems analysis, etc.

During the two year cycle of this report, the Child and Youth Studies (CYS) Ed.D. implemented a National Cluster which makes extensive use of communication and information technology. Several CYS study areas are similar to PHE.

V. Outcomes: Output and Impact

The need for proactive, visionary, transformational leaders to fundamentally restructure industrial era establishments is documented extensively in the literature. The central issue is how should graduate education programs organize a set of learning activities to produce the new professional and, perhaps more importantly, how to provide for their continuing development and the revitalization of the workforce presently employed in our human resources development enterprise.

PHE and VTO can positively influence the development of conceptual, interactive, and technical competencies and skills as they relate to preparing transformational leaders who can think strategically about restructuring industrial era establishments. Student evaluations have repeatedly indicated that anticipating the future was the single most important lesson from the P-HRD and E-VTO seminars.

A tight relationship has been established between the VTO seminars and practica and MARPs. Four VTO practica have been chosen for inclusion in Components of Exemplary Proposal And Practicum Reports. The "Identification of New Technology Affecting Nursing Practice in Austin Area Hospitals" by Keith E. Ragsdale helped to develop a set of specifications for a nursing and allied health laboratory at Austin Community College as well as obtain endowed nursing faculty positions. This practicum led to a MARP prospectus.

MARPs are another testimonial to the integrity of the VTO specialization. "The Development, Implementation, and Evaluation of a Model for the Review of Associate in Science Degree Programs" by Brian C. Satterlee is an excellent product that should have some impact on program review. "Workforce Education and Training Requirements for Communications and Information Technologies at the United States Army Aviation Center" by Michael Wayne Cupples could very well become a model that can be replicated at many military institutions. "The Potential Impact of Barcode and Smart Card Technology on the Hospital of the Future and Contemporary Educational Programs" by Keith Ragsdale could very well be significant to all of nursing and allied health education as well as health care services.

Impact takes a variety of forms. A graduate asked me to address the presidents of two-year colleges in the 19 state region of the Council of North Central Community and Junior Colleges on the topic of "Restructuring for the 90s ... And Beyond." The Director of the Vocational Industrial Education Steering Committee in Taiwan has asked me to address vocational educators on several topics this fall. Both of these activities hold great potential to market graduate programs of high quality.

VI. Conclusion

PHE and VTO should continue to experiment with ways to fulfill the mission to provide a high-quality, applied, field-based doctoral program to practitioners around the world. No other specialization is more critical to quality of life in industrialized nations and newly industrialized countries than VTO. The U.S. longitudinal study of 1982 indicated that of 100 students going through the contemporary traditional education pipeline, 11 graduated from the academic track, 34 from the vocational track, 31 from the general track, and 24 had dropped out. At the post-secondary level two-year colleges are the primary means for achieving equality of education opportunity as well as providing the critical mass of technicians for today's workplaces. Research has demonstrated that the classical academic approach to "modernized" education reform is insufficient, that VTO programs of high quality should be the program of choice and accessable for many people.

Although "special" student designation was made available for VTO in 1989, no one in that category participated in P-HRD 1990 and the concept was not marketed in E-VTO 1991. There must be hundreds of VTO professionals who would be interested in taking just one doctoral seminar of high quality, perhaps two seminars, and then perhaps even the entire program. Furthermore, there must be many more persons who aspire to become vocational supervisors or persons who aspire to become academic leaders in a two-year college who could benefit from a VTO seminar of high quality. In addition, a certificate package of HRD and a VTO seminar could be marketed to institutions or systems with HRD scheduled in winter or spring term followed by a seminar in VTO. Also, many third year students in other specializations, gradautes, and other professionals could benefit from by fine tuning competencies and skills relative to strategic thinking about restructuring establishments.

VTO should be designated to pursue more vigorously the philosophy that education should not be timebound or placebound. Distant education systems which make extensive use of electronic highways will be a dominant mode for human resources development in the 1990s. In many cases, VTO professionals are few in number in small institutions in isolated areas. In the PHE program, it is common for there to be but one VTO specialization student in a cluster. VTO professionals should be pioneering the use of contemporary technology for human resources development and community renewal. VTO professionals should be in the forefront of organizational learning for adaptation, and applying The Fifth Discipline to building communities through electronic highways. Electronic communication and information technologies are the crude oil of the information era.

APPENDICES

Personnel - Human Resources Development, 1990

Overview of Memos/Materials, P-HRD 1990

A. Aug 15, 1989 Academic Credit

B. Dec 8, 1989 Enrollment of Special Students in VTO

C. March 1990 Cover Memo + Study Guide for P-HRD 1990
   1. Preface - Overview and Contract Package
   2. Units of Study
   3. Appendices
      A - Dallas County Community College
      B - Sources of Trend Information
      C - Synthesis Paper Guide
      D - Personal Data Variables
         a. Personal Data Variables Sheet
         b. Kolb Learning Styles Inventory
         c. Hemisphericity
         d. Modified Myers Briggs

D. Welcome and Contract Letter
   1. Materials listed in A, B, and C
   2. Summer Institute and creative, visionary leadership

E. Early June Memo - Define HRD
   1. HRD - within and between establishments
   2. The Education Utility - HRD Plan of Action
   3. Nat. Institute for Staff & Orgal Dev (NISOD)
   4. Center for Occupational Res & Dev (CORD)

F. Memo to Cluster Coordinators and Nova U. Leadership

G. Mid June Memo - Global Strategic Thinking
   1. The 1990s - Restructuring Economies & Education
   2. Pacific Rim and Collaboration
   3. Analysis of Significant Concepts and Implications

H. Late June Memo - Preparing Human Resources For A New Era
   1. Significant Concepts - Governance Structure, Mission Priorities, Program Structure, Course Mosiacs, Pluralism, and Accreditation
   2. Preparing Human Resources For A New Era
   3. Options to Contemporary Industrial Era Institutions
   4. Issues - Tools, Intellectual Capital, Will

I. July 22-28 Summer Institute
   1. Resource Manual for P-HRD
      a. Readings
      b. Practicum & MARP Ideas + Survey Instruments
      c. Proposal Development
      d. Sources of Information
   2. Leadership Resource Manual
   3. The 1989-90 School Year In Review

1531 Peabody Avenue
Memphis, TN 38104
June 1, 1990

U. R. Welcome
2020 Vision Ecstacy Pinnacle
Information Era, World 20001

Dear U. R.:

Welcome to P-HRD 1990. I trust you having a good year and making excellent progress on Nova activities.

You should have received (1) a memo from me with attachments dated March 1990 and (2) the P-HRD 1990 Study Guide. The attachments to the memo (1) provided resources, (2) reviewed academic credit for experience and participation in a professional development activity, and (3) discussed special students in P-HRD. The Study Guide "Preface" is an overview of P-HRD which leads to your contract. Enclosed is a signed copy of your contract. You should also complete the tests in Appendix D and submit the sheet on page 121. Also, save HRD articles such as the one enclosed.

P-HRD and the 1990 Summer Institute will be very exciting. Research indicates that leadership consists of three primary activities: (1) analysis and evaluation, (2) creating visions of the future, and (3) transforming visions into multi-year action plans. Your P-HRD papers will be on analysis and evaluation. Summer Institute presenters will help clarify visions of the future. P-HRD Summer Institute work sessions will focus on developing action plans.
I believe all 19 of last year's first year students will be returning. In addition, many new international and special students will participate in P-HRD.

I want to express my enthusiasm in working with you. We are living in a historical era. We did not live during the transition from an agricultural era to an industrial era. We are living, however, during a global, economic, structural transition with greater and more far reaching implications. We have the opportunity to provide creative, planned, proactive, visionary leadership. I look forward to working with you.

Sincerely,

Warren H. Groff
901-725-5287

TOWARD THE 21ST CENTURY: PREPARING THE WORKFORCE OF THE FUTURE IN A GLOBAL RESTRUCTURED SOCIETY

Numerous issues will be important in the future. Few issues, however, will be more important than having an educated and trained workforce for workplaces of the future in health and human services, in business and industry, in government and the military, in the education and training, and other restructured establishments.

Nova University offers a specialization in vocational, technical, and occupational education through two seminars. One has a focus on the workforce of the future and the second on the workplace of the future. The workforce of the future seminar, "Personnel - Human Resources Development" (P-HRD), is offered in 1990. P-HRD is a seminar that deals with (1) changes in society to determine education and training needs, (2) synchronizing a human resources development plan with the organizational development plan, (3) HRD in a technical era which is global and information intensive and (4) two elective topics on HRD. P-HRD can be taken for credit or audit by someone (a) not in a doctoral program but meeting admissions requirements for such a program, (b) in a doctoral program at a university who would like to transfer the credit, or (c) who has completed a doctoral program and wants this additional competency. A student can receive credit for prior learning for one unit and for participation in a professional activity for another unit. Students have received credit for a book, a proposal, a set of instructional materials, etc.

Each student received instructions, Study Guide, textbooks, and related materials in early spring and completed a learning contract with specific topics to be researched. Completed assignments were evaluated by the specialization coordinator who provided feedback along with a progression of memos, which are attached, that focus on restructuring economies and education. Each student completes a one page analysis of significant concepts and their implications to be discussed at the Summer Institute.

At a one week Summer Institute, participants hear nationally renowned speakers and engage in learning activities. Each student receives an P-HRD Resource Manual and Leadership Manual. Each student contributes information to the process and develops a plan of action for her/his work context. The Summer Institute theme is "Leadership for Innovation and Change" and will be held at the Marriott Harbor Beach Resort in Ft. Lauderdale, July 22-28, 1990. Each student then writes a synthesis paper combining significant concepts and implications drawn from the self-directed learning segment with the significant concepts and implications obtained at the Summer Institute. An individual can participate only in the Summer Institute.

The VTO specialication coordinator is Dr. Warren H. Groff. The 1984-85 cycle is in ED 272 247. The 1986-87 cycle is in ED 290 860. The 1988-89 cycle entitled **"TOWARD THE 21st CENTURY: Preparing Strategic Thinkers In Vocational, Technical, and Occupational Education"** is available from the ERIC Clearinghouse on Adult, Career, and Vocational Education, The Ohio State University, 1900 Kenny Road, Columbus, Ohio 43210-1090. Request **ED 053 431**. Phone (800) 848-4815 or (614) 292-4353.

The workplace of the future seminar will be offered in conjunction with the Summer Institute at the Embassy Suites in Ft. Lauderdale, July 28 - August 3, 1991. It will follow a similar format. Additional information about both seminars can be obtained from Dr. Peter K. Mills, Nova University, 3301 College Avenue, Ft. Lauderdale, FL 33314. (305) 475-7385 or 1-800-541-6682 x 7391

PERSONAL DATA VARIABLES

Please Print Plainly

_______________, _______________
Last Name First Name

Sex _______
M or F

____
Number and Street

Age _______

_______________, _________ _________
City State Zip

Home Telephone (   ) _______________
Work Telephone (   ) _______________

Cultural Background _______________
(White, Black, Hispanic, Asian, N. Am.)

State of Origin _______________

Undergraduate Major _______________
Masters Major _______________
Current Occupation _______________
If Educator, Grade(s) Level _________
Number of Children _______
Number of Grandchildren _______

Status _______
1. Single
2. Married
3. Separated
4. Divorced
5. Remarried

Myers Briggs Planning Preference

E	I	S	N	T	F	P	J
_	_	_	_	_	_	_	_

Kolb Learning Styles Inventory Scores
Concrete Experience Score _______
Reflective Observation Score _______
Abstract Conceptualization Score _______
Active Experimentation Score _______

Hemisphericity
Right ____
Left ____
Integrated ____

Student Progress

Please indicate the term you started the Nova program, the sequence you took core and specialization seminars, and practicum status -- ideas, proposals accepted, accepted proposals being worked on, and completed practicums. Please return the completed progress report with one of your assignments later this month.

____________________, ______________________
Last Name (Print)   First Name (Print)

Term program started ____________________, 19___
Fall, Winter, Spring

Seminar	Practicum or Idea (Indicate Status)
1. ________________	
2. ________________	
3. ________________	
4. ________________	
5. ________________	
6. ________________	
7. ________________	

Ideas for Major Applied Research Project:

P-HRD 1990 Early June Memo

Human Resources Development (HRD) is a generic phrase that includes activities intended to increase productivity within an establishment or between establishments. Within educational institutions, HRD could include the integration of the academic and vocational tracks, the integration of areas of study such as science and technology, learning preferences and teaching styles, at-risk students, cultural diversity, disabled and handicapped, ethics and values, integration with arts and humanities, effective use of advisory committees, communication and information technologies, use of software packages, student assessment and effective management of instruction, school and college collaboration, partnerships with other establishments, articulation, and the use of planning and management technology. HRD in health and human services could include the shift from acute care to community based delivery of care, bedside information systems in acute care settings, and distant delivery systems for health education. HRD in business and industry could include concurrent engineering, workforce readiness, technology transfer, and international trade. HRD in government and military could include a conversion from a military contracts economy, alternatives to incarceration, leadership development activities and neighborhood, community, and state goal setting activities.

The educational system that has evolved was based on the principles of the industrial era. There is very little difference between traditional schools in developed nations and newly developed countries. Traditional schools consist of bureaucratic layers based primarily on the age range of students served. Even within the contemporary traditional education model it is possible to envision partial technological deschooling as proposed by Jack Taub in 1985 and contained in The Education Utility by Dennis Gooler. (See attachment). Collaborative lifelong learning and other forms of alternative education are possible. The industrial nations of the world will restructure education in the 1990. Our role is to help influence the direction and translate the design into a HRD plan of action.

Many organizations are concerned with HRD. Two of them are:
The Nat. Institute for Staff and Organizational Dev.(NISOD).
Community College Leadership Program
The University of Texas at Austin, EDB 348
Austin, TX 78712   512-471-7545

The Center for Occupational Research and Development (CORD)
and National Coalition of Advanced Technology Centers
601-C Lake Air Drive
Waco, TX 76710   800-772-8756

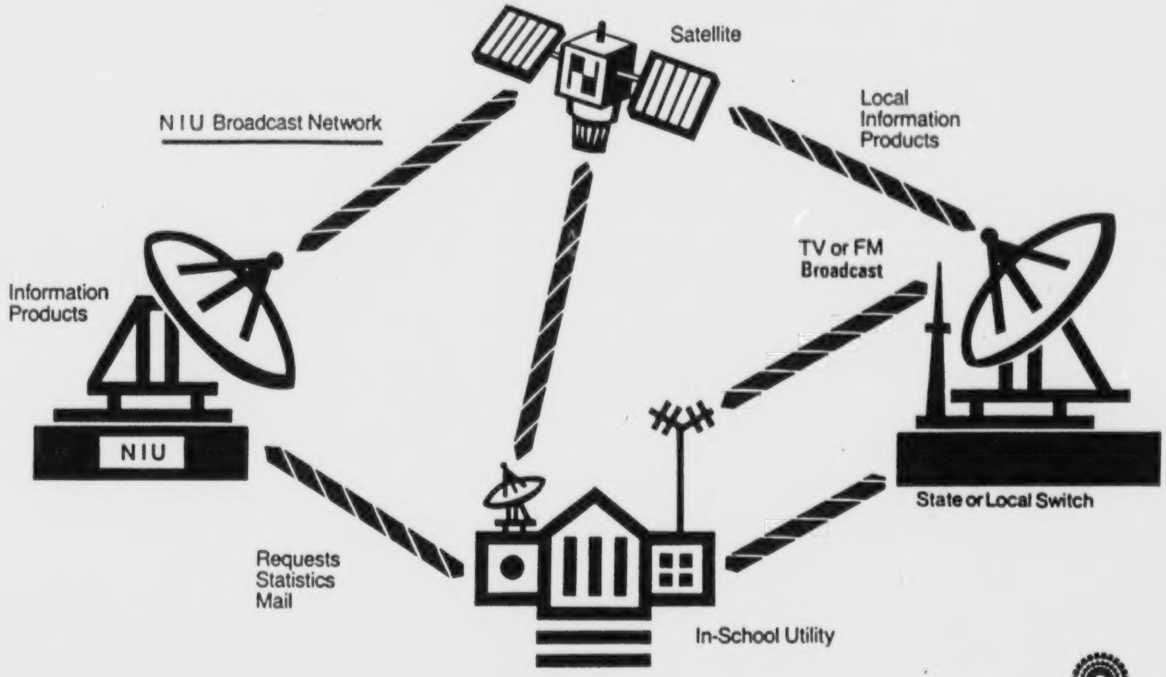

Figure 1

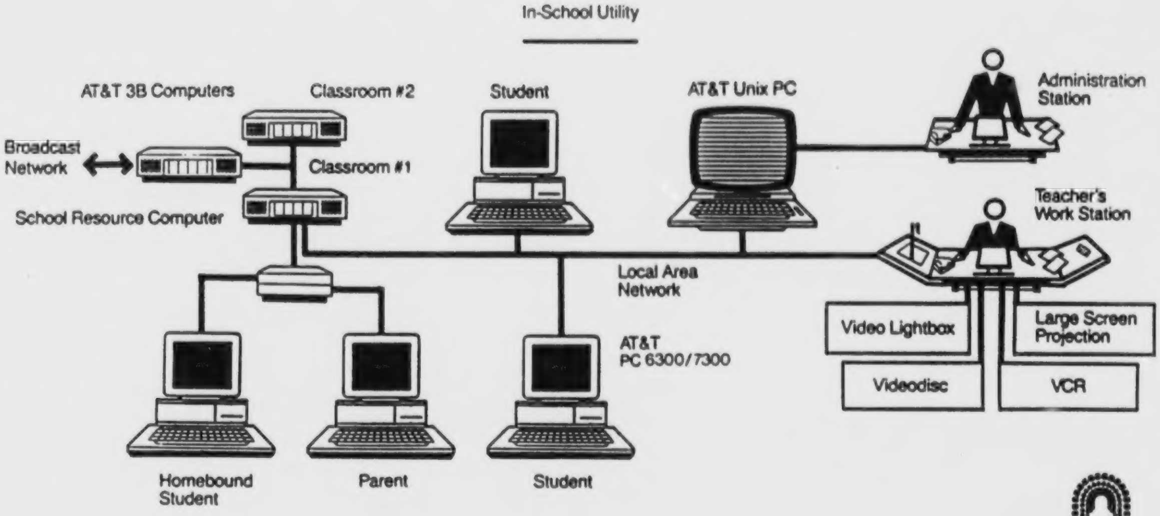

Figure 2

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P-HRD 1990 Mid June Memo

The 1990s will be the most exciting period in history. Between now and the year 2000 we will make decisions that will shape the quality of life in the 21st Century. Industrial nations and newly industrialized countries will globalize through communication and information technology.

After World War II, the U. S. had 75% of the World's Gross National Product, it had a per capita income twice that of the next country, it spead mass public education through the postsecondary level and attempted to achieve equality of opportunity throughout the educational pipeline, it built the most advanced and largest scientific and technological infrastructure in the world, and the U.S. led the world in the development of managers and management technology. As we enter the 1990s, the U.S. now has 23% of the world's GNP, it is only the ninth wealthiest country in terms of per capita wealth, its mass public education system is in disarray, it remains a world leader in a few areas of research and development but not in the commercialization of discoveries and inventions, and it has declined considerably in manager and management technology development.

While the world is shifting from an industrial era to a technical era based on communications and information technologies, the U.S. public education system clings to the traditional industrial era bureaucratic layered schools. Our contemporary traditional public school system is structurally flawed, grossly overloaded with entitlement programs, inadequately equipped with technology and human resources, underfunded, and no longer viewed with public confidence. An analysis of education reform by the Center for Policy Research in Education and by persons who participated in the planning sessions for National Research and Development Centers sponsored by the Office of Educational Research and Improvement of the U.S. Department of Education Office concluded that we are "tinkering at the edges," hoping to fine tune the traditional industrial era school. The need for fundamental restructuring is recognized by the National Association of State Boards of Education in Right from the Start, by the Council of Chief State School Officers in Success for All in a New Century, by the American Association of School Administrators in Restructuring America's Schools, and the Center for Restructuring of the American Federation of Teachers.

Vocational education in the U.S. was conceived during the industrial era. The program structure reflects the occupational structure of jobs during U.S. preeminence of that era. The education reform movement of the 1980s has focused almost entirely on the academic track. In many instances, the raising of high school academic graduation requirements has exacerbated the dropout problem. The 1983

Longitudinal Survey indicated that of 100 high school students, 34 graduated from the vocational track, 32 graduated from the general track, 11 graduated from the academic track, and 24 dropped out. The 1989 National Assessment of Vocational Education indicates that the average academic student takes 3.18 vocational units. The general track does not prepare a student for the world of work or for higher education. Research is showing that the traditional approach to the academic track education reform is insufficient. Technical education of high quality should be the program of choice of many students, perhaps most students, and should be available to the current workforce.

The National Center for Research in Vocational Eduction is currently analyzing models for integrating academic and vocational education, conducting detailed job analyses for five occupations in the medical imaging family, targeting some resources on electronic networks and electronic delivery systems, and expanding its research and technical assistance for special populations -- handicapped and disabled, at-risk and disadvantaged, and cultural diversity. The Office of Educational Research and Improvement (OERI) of the U.S. Department of Education is analyzing student educational competencies and standards essential for the workplace and developing materials to bridge the gap of the critical relationship between education and work. The U.S. Department of Labor has established the Secretary's Commission on Achieving Necessary Skills (SCANS) to develop guidelines for education reform. Eighteen research and development centers will be funded by OERI for the next five years. The Hudson Institute is conducting Project Learning 2001, a program sponsored by eight U.S. corporations and foundations, aimed at devising strategies to restructure America's education and training systems. Several states, notably New York and Minnesota, and Canadian provinces, British Columbia and Ontario, have major projects on restructuring underway. Thus, we are restructuring.

The Pacific Rim will play an important role in shaping the future. Japan leads the Pacific Rim in economic growth followed by four newly industrialized nations: South Korea, Taiwan, Hong Kong, and Singapore. These are the fastest growing economies of the world. They are followed by the capitalist free-market countries of the Association of Southeast Asian Nations: Brunei (the richest country in the world by per capita income), Thailand, Malaysia, and Indonesia. Japan is the most dynamic of the world's developed nations. Its growth rate is about double the rest. It is second in the world in gross national product -- passing the Soviet Union, which is 60 times its size, years ago. It is a world leader in high tech, electronics, computers, special materials, robotics, and more.

South Korea is the largest shipbuilding nation in the world, its auto industry is the fastest growing in the world, and its steel production gives it top billing. **Taiwan** is the world's leader in economic growth over the past 20 years; it has had more years of double-digit growth than any other nation in recent times. Hong Kong and Singapore are city states that are very productive. **Hong Kong** exports more manufacturing products than the Soviet Union and East Europe combined. **Singapore** is a financial base and wholesaler to countries in the Pacific Rim and is even more dynamic in terms of economic growth (John F. Cooper).

What do these countries have in common? They are all Confucian work-ethic cultures. The family is the most important unit of society and less is expected from government. They have limited natural resources but an abundance of human resources. Two of them have no tariffs and are completely free-trade countries. They have tied their economies to the world economy. Most important, they stress and value **EDUCATION** and are improving it.

We have the potential to reshape education within our institutions and among our countries. Yng-chien Sheu published an exhaustive analysis of vocational industrial education in the Republic of China (Taiwan) in May 1985 and brought it to the 1989 summer institute. Vocational Industrial Education, the vocational journal in Taiwan which he edits, contained an analysis of vocational education in Sweden, Ireland, France, United Kingdom and also described influences and systems in Japan, America, and West Germany. Vol. 7, No. 5 also contained my "Critical Mass" article on intellectual capital that appeared in the November 1984 issue of the Journal of the American Association of Community and Junior Colleges. Last year he gave the information about the U.S. National Center for Research in Vocational Education to the Ministry of Education of the Republic of China and now Taiwan has a Vocational Technical Education Research Center.

Josephine Chen operates Yu-Teh High School and Hsieh-Ho Polytechnic Vocational School in Taipei with approximately 7000 students and is planning two technical colleges, one in Taiwan and one on Mainland China within four to five years. Ching-Chieh Lien is a professor of industrial education at the National Taiwan Normal University. Wanhyung Lee is Chairperson of the Department of Tourism at Hanyang Women's College of Hanyang University in Seoul, Korea.

Some of you will want to concentrate on HRD projects for your department or establishment. Others may want to work on a vision of alternative education based on contemporary communication and information technology. Keith Ragsdale, Chairperson of Nursing and Allied Health Sciences at Austin Community College in Austin, Texas, is contemplating a Major

Applied Research Project that would be a vision of a contemporary delivery system for health promotion and education that would reach impoverished people in Texas and Mexico. Keith and Josephine could collaborate on a system using contemporary technology that would impact on nursing education and the quality of health care for many people. Pearly Cunningham, Department of Physical Science and Technologies at the South Campus of Community College of Allegheny County is a member of the AACJC Tack Force on the Status of Science, Mathematics, and Engineering Education in Community, Technical, and Junior Colleges. Last year he reported on the 1988 National Science Foundation workshop to recommend funding priorities for undergraduate education in science, engineering, and mathematics. Frank Tedeschi, Dean of Technology at Cleveland Institute of Electronics, is concentrating on academic administration in technical education with a focus on distant learning; CIE is the largest home study college in the world specializing in electronic and enginering technology programs including an associate degree. Pearly and Frank could collaborate on the latest research and development (and funding) and design a plan to enhance learning for students and teachers on campus that can be distributed throughout the world through distant learning delivery systems, possibly linked with the Carnegie Mellon University electronic library. Alexander My could collaborate on either, or both, of these projects to help Cambodians in the U.S. or link the programs to Phnom Penh; the three Communist Indochina nations of Cambodia, Laos, and Vietnam are among the poorest countries in the world.

What visions of the future can we dream and then translate into a HRD multi year action plan? Vision creation was the purpose of Perspectives of the Education and Training System of the Future (ED 272 772) and The Learning Community of The Future: Education and Training in the 21st Century (ED 280 538). Anticipating the future is the logic behind specialization seminars on "Workplace of the Future" and "Workforce of the Future" (ED 053 431). The U.S. Agency for International Development is already funding five year action plans with Organizational Development (OD) and Human Resources Development (HRD) components. For example, last year a request for proposals sought assistance to help Cairo, Egypt, develop a management information system over the next five years. Industrial nations will restructure education and link more closely schools and colleges to the emerging global economies -- European Community and Pacific Rim. Nations and countries can restructure eductional systems unilaterally or collaboratively. My hypothesis is that the countries that restructure their education systems collaboratively will have a competitive advantage.

John F. Cooper. Speech given at the U.S. Office of Personnel Management conference in Kassel, West Germany, March 14, 1990. The Commercial Appeal, May 27, 1990, B-7.

Analysis of Required and Elective Units. A few students have completed the required and elective units. The next step is to complete an analysis of significant concepts and implications for the five units. Attached is a copy of the analysis completed by Michael W. Cupples in Emergence of Vocational, Technical, and Occupational Education in 1989. List the significant concepts and implications if you received academic credit for prior learning for a unit and/or participation in a professional development activity. List you name on the one page analysis. Xerox 70 copies and bring the copies to the Summer Institute for distrubution to VTO students, special students, and guests.

Articles on HRD. My letter acknowledging receipt of your contract indicated that you should save HRD articles. Record all citation information such as vol, no, date, etc. Xerox 10 copies of 4 to 6 pages of significant information for distribution to persons in a small group you will join. Bring the folder of HRD articles to the Summer Institute.

Strategic Plans and Proposals. P-HRD Summer Institute sessions will focus on developing multi year action plans. Bring institutional strategic plans, requests for proposals from federal and foundation programs, proposals developed by your institution, evaluation comments, etc. P-HRD sessions will progress through the phases of proposal development: "WHY" - rationale; "WHAT" - goals and objectives; and "HOW" - methodology, evaluation, and budget.

Resource Manuals. At the Summer Institute you will receive three resource manuals. I have assembled a thick manual consisting of readings, practicum and MARP ideas and survey instruments, proposal development materials, and sources of information. You will also receive other manuals.

Practicums and MARPs. Bring completed practicums, approved practicums your are working on, and ideas for practicums and MARPs. I am the practicum evaluator for VTO and a MARP advisor. I do the Snowmass Institute for Strategic Planning July 14-20, fly to Florida in the morning of July 21, and will be available to meet with students Saturday afternoon and evening and Sunday morning. I will be available through Saturday afternoon on July 28. The practicum processing procedure will permit a student to work directly with a practicum evaluator after the Cluster Coordinator and Research Associate have approved it.

Leadership Workshops. The spring 1990 issue of the Pratcitioners' News indicated that five workshops will be offered on leadership. I will be presenting the workshops in Ft. Lauderdale on Jan. 10-11, San Francisco on Feb. 7-8, Washington, Mar. 8-9, San Antonio on Apr. 18-19, and Chicago on May 2-3. Brochures will be available soon from Nova.

SIGNIFICANT CONCEPTS	IMPLICATIONS
FUNCTIONAL LITERACY. Individual inability to use written information effectively in emerging technical/automated workplace of information/ service based society. Not enough to just comprehend written materials or be at selected reading grade level. Involves cognitive processes of reading complex/technical written materials (technology), interpreting information for intended outcomes (thinking), and ultimately accomplishing desired task successfully (productivity) in relation to its implications and effect in the individual's environment. Computer literacy is significant. Unsatisfactory high rates in women, minorities and 20-39 age group. White majority has greatest numbers. Individual(s) must cope with office automation systems, information processing networks, and expert knowledge systems in his/her environment.	Employees without adequate functional literacy skills are information poor, second class citizens, and at a serious social, political, and economic disadvantage (have nots) within society. "New organizations" are dynamic and high technology dependent. VTO-E has not kept pace and has yet to take the problem of adult functional illiteracy seriously because it is treated as a personal misfortune rather than as a real and serious threat to the nation's standard of living and well being. Demand for U.S. business to be competitive internationally and the need to reverse a declining rate of productivity are placing new expectations on VTO-E. VTO-E must contribute more to technical, economic & social development.
INFORMATION PROCESSING SKILLS(IPS). Just as the spread of the telegraph, postal service, telephone, and typewriters created the conditions that allowed organizational structures to respond to the Industrial Revolution, so has IPS in relation to today's information/service society. Information is now substituted for both energy/ labor and material/capital. Information has always been a resource, but poorly understood. Knowledge is power but it is not clearly true that information is the equivalent of knowledge. Individual(s) with adequate IPS and organization(s) with effective information management routinely access traditional government and industry databases. A desktop computer can make a trained individual more efficient or fifteen percent in productivity. IPS include word processing, network(s) manipulating, analysis, electronic mail, and telecommunications.	Information is a strategic tool that organizations must learn to use in these times of limited economic growth. Increasing technological advancements, an increasingly segmented society, and a changing system of social values. An individual or small organization can now have as much information/power that was once only available to government or a large corporation. Ability to possess absolute information incurs a legal liability for the total correctness of its use and removes the shield of ignorance. Projected "paperless office" has not materialized. Development of information processing skills requires a rethinking of traditional views on the importance of formal, in-class training, adequacy of "hands on" experience, and excessive time away from the job.
CRITICAL THINKING SKILLS. The area of higher order comprehension (critical thinking) skills is more significant in today's information/service society than ever before. Ability to think critically in the solution of problems is one of the most important abilities in today's fast paced society of technology, information processing, and quick decisions. Individuals developing skills in critical thinking not only enhance survival in the job market but also assess, criticize, and take better control of their lives. This ability can enhance the functional efficiency of individuals responsible for day-to-day operations and even overall strategy and "visioning" development. Thinking skills are critical to effective leadership in "new" organizations.	Educators must abandon the lockstep, competency-based curriculum and devise new higher order comprehension (thinking) skills development strategies. The "new" worker must be flexible, willing to learn new skills, self-directed, creative, good with time management, and a thinker. Good jobs are information/service work requiring brainwork, knowledge, conceptualization, intellectual performance and critical thinking--uniquely human functions that automation or expert systems can only help. Technology becomes useless without expert knowledge training. The new norm is workers with good critical thinking skills in small information/service organizations of twenty-five people or less being more productive.
CHANGING WORKFORCE. While the "baby bust" of the 1970's reduces the pool of entry level workers, the number of middle-aged "baby boomers" increases nationally by 50 percent between 1975-1993. They aspire to mid-management jobs previously promised in traditional industrial organizations, but these jobs are declining because of the active stream-lining of information/service organizations for productivity under automation. Million working-age immigrants enter the U.S. each year, many of them with limited language and job skills. 700,000 youth drop out of school each year. Workforce views VTO-E as not relevant.	Young people entering the work force now will change occupations about four times during their careers and two of these occupations do not even exist yet. Women, aged, and racial minorities are disproportionately found in the non-expert, deskilled jobs, underemployed and unemployed. Inability of middle-age "baby boomers" to "move up" may lead to intergenerational, interracial, and intergender tensions. 3/4 people now in the workforce will require training/ retraining to fill "new" jobs created by emerging technologies.
INSTRUCTIONAL TECHNOLOGY. Technology is the trigger that continually transforms all aspects of the information/service society. The Army is grasping this expensive instructional technology through a big investment to enhance its war-fighting capabilities. The status quo of Army education would have remained the same except for three recent technological developments that are driving or triggering Army acceptance of this wave of technology into its war-fighting ranks and educational institutions. Technological hardware costs are more acceptable. The number and quality of traditional curriculum related programs are increasing. Education is experiencing a "computer revolution."	Even more acceptance is anticipated with emerging artificial intelligence, expert systems, authoring menus, "finger-on-glass," notebook computers, speech processing, and telecommunications. The best features of automated and human instruction used together in the classroom. Humans are highly interactive, flexible, and adaptable. Technology is reliable, tireless, specific, and consistent. Computer assisted training is of special interest because of its potential application in training soldiers to think and conceptualize doctrine with guided self-directed learning in a highly interactive learning environment. However, it will never be allowed to dehumanize the teaching and learning process.

P-HRD 1990 Late June Memo

The early June memo provided (1) a generic definition of HRD which included activities within and between establishments and (2) a brief discussion about forms of alternative education such as partial-technological "deschooling," possibly through an "education utility" concept, and cooperative lifelong learning. The mid June memo discussed the restructuring of world economies and the implications for restructuring components of the learning enterprise. It is apparent that the countries that restructure their education and training enterprise in harmony and synchronization with the emerging global economies of which they are a part will have a competitive advantage in the 21st Century. For the U.S. that means knowledge about the European Community, the Pacific Rim, and the emerging North and South American Common Markets. The industrialized nations that want to be competetive in the 21st Century will restructure their learning enterprise to produce the critical mass of intellectual capital to think strategically (globally) and a workforce with a "cultured mind and a cunning hand" that is knowledgeable about cultural diversity and skilled in communication and information technologies.

An education system is intended to prepare the human resources to sustain the society of which it is a part. A number of significant concepts are important to understand as a prelude to preparing human resources for a new era.

Governance Structures vary greatly in the U.S. because education essentially is a state function. In many industrial nations of the world, a Ministry of Education provides direction for education. A few states have a single board and agency for all levels and types of education. Some states have separate boards for different levels and types of education. Several states have a separate, single board for vocational, technical, and occupational education. The term vocational education usually refers to secondary education and the term technical education usually refers to postsecondary education.

Mission Priorities vary greatly between university parallel programs, occupational programs, research and service programs, and remedial and developmental programs. States with high rates of poor student success and adult illiteracy support remedial and developmental programs. States with need for economic revitalization have funded economic development, customized training, and technology transfer programs. Some states fund continuing education.

Program Structure varies greatly from institution to institution. In small school districts in rural areas, a vocational unit may consist of a single home economics laboratory and a single general shop for grades 7-12. In large metropolitan areas, magnet optional schools are dedicated exclusively to clusters of occupations -- creative and performing arts, science and engineering, etc. Similar distinctions are also true for postsecondary institutions.

Course Mosiacs vary greatly. Some institutions emphasize the academic track - university parallel courses almost to the exclusion of technical skills necessary to be productive in today's workforce. Other institutions emphasize technical skills almost to the exclusion of a core of general education and liberal arts courses.

Pluralism, decentralization of control - empowerment, and freedom to be different are characteristics contributing to educational quality. Accreditation is uniquely American.

Preparing Human Resources For A New Era

The preeminance of the U. S. as an industrial nation immediately after World War II was attributable, to a great extent, to research and development and to mass, public education. Since the 1940s the nations that were devastated in WW II have rebuilt with contemporary technology and are restructuring their economies and infrastructure. In the U.S., industrial era schools and colleges and traditional institutions of society are no longer functioning well in the early stages of development of the emerging global technical era. Furthermore, the situation will worsen as postindustrial nations make the transition from an early stage to the advanced stage of the global technical era. The 1990s will be the decade of rapid fundamental restructuring of basic units of society. The restructuring of the "family" is evident. Health care and business and industry have been restructuring and will experience even more in the 1990s. The postindustrial nations that restructure schools and colleges most effectively will be the most viable countries in the 21st Century. The serious questions are (1) direction and (2) how to proceed.

When thinking strategically about restructuring industrial era schools and colleges, it is important to highlight some of the significant achievements of the past decade and numerous projects that will shape future directions. Pat Cross indicates that many years ago education accepted the relatively easy task of teaching primarily those who had already demonstrated that they knew how to learn what teachers knew how to teach. Because the nature of the raw material (students) changed, industrial era schools and colleges adjusted to extend equality of educational opportunity to underrepresented groups through remedial and developmental programs, retraining and upgrading workforce programs, adult illiteracy programs, etc. Furthermore, public officials and taxpayers demanded a greater return on investment. State policy makers created targeted programs such as "Design for the Eighties" in South Carolina, "Ben Franklin Partnerships" in Pennsylvania, the Ohio Technology Transfer Organization and Ohio Industrial Training Program, and many more. Thus, elitist walls gave way to egalitarian mission priorities. Even with these great strides, genuine partnerships, reunification, or even synchronization and harmony between the world of education and the world of work is a long way off. As the U.S. restructures from a military contracts economy to a free world market economy, this infrastructure and understanding will be extremely valuable.

It is useful to examine major projects when thinking about restructuring: Education EQuality Project "Academic Preparation For College: What Students Need To Know And Be Able To Do" by the College Board and a state implementation model by The Tennessee State-Wide School-College Collaborative for Educational Excellence; "Project 2061" by the American Association for the Advancement of Science and the implementation in six national sites in San Antonio, Philadelphia, San Diego, and San Francisco; "Middle College" opened at LaGuardia Community College in 1974 and Middle College High School replication at Shelby State Community College in 1986; and many other projects. It is also useful to analyze national and state projects that deal with teacher and administrator recruitment, preparation, certification, and continuing professional development. Such projects would include work of the University Council for Educational Administation, The Holmes Group, South Carolina Center for the Advancement of Teaching and School Leadership, and many more. Laudable as these projects are, they all asssume that contemporary traditional education (CTM) -- with fine tuned enhancements -- will be the most viable system for a global information era.

Are there other options? There is no doubt that more technologies will be integrated into the curriculum at all levels. Partial technological deschooling (PTD) will probably become a reality in a limited way at all levels in "have" school districts and "have" states. There is not much likelihood, however, that PTD will become a widespread option for diploma and/or degree completion in the 1990s. Cooperative lifelong learning (CLL), including academic credit for public service, will probably also become more extensive at most levels but will not become a widespread option for diploma and/or degree completion in the 1990s.

Problem based learning (PBL) is another viable option. While the roots of PBL can be traced to apprenticeship programs, there are more recent concepts that fit this framework. After the Sputniks were launched in 1957, the U.S. created research and development centers to generate new knowledge and regional educational laboratories to demonstrate and disseminate the new knoweldge. The Learning Resources and Development Center (LRDC) in Pittsburgh and

Research for Better Schools (RBS) in Philadelphia developed and demonstrated "Individually Prescribed Instruction." The IPI math program was intended to take a child six grades to complete, but one first grader completed the math sequence in six months. A second concept is "Individual Education Plans." Research supports the idea of a comprehensive assessment of a student by a team of diagnosticians and providers and the specification of an IEP to help guide development -- intellectual, emotional, social, physical. Research supports the keeping of a journal or log by a student of self development and evaluation which is reviewed by the provider team. Can these strategies be used is a nontraditional learning format?

A presentation by an engineer and another one by a physician in the 1970s dealt with restructuring the curriculum around PBL. The John A. Burns School of Medicine at the University of Hawaii overhauled its curriculum and abandoned the lecture hall format. An overwhelming amount of information that students memorize becomes obsolete by graduation. Students now work in small groups researching answers to real health problems. Students interact with patients earlier and research medical science subjects in order to solve specific clinical health problems rather than attending lectures that cover only one subject such as physiology or pathology. The shift is from accumulation of facts and passive learning to synthesis of information and active application of knowledge through problem solving.

The Children's Defense Fund, the Child Welfare League of America, and the William T. Grant Foundation have volumes of data about conditions of society and children and youth. A commission of the National Association of States Boards of Education and the American Medical Association indicates the future is bleak for U.S. teens. The cost, productivity, outcomes, and return on investment of industrial era education has been documented. The National Assessment for Educational Progress indicates that only 20% of American high school seniors can write a simple letter, only 12% can arrange a series of fractions in order of size, only 5% can read a bus schedule, and only 3.5% could pass the graduation exam of a European high school. The National Commission on Testing and Public Policy indicates that "mandatory testing consumes some 20 million school days and the equivalent of $700 million to $900 million in direct and indirect expenditures annually." The Economic Policy Institute, Hudson Institute, and Brookings Institution have produced reports about education. One conclusion reached from this information is that radical changes must be made toward privatization -- to move from a monopoly on mass public education to a free enterprise market driven mosaic of caring and learning environments.

What restructuring initiatives have been started? The Council of Chief State School Officers (CCSSO) adopted policies on early childhood and family education, community service, restructuring schools, and community education. CCSSO and the American Public Welfare Association have launched "Joining Forces" to guide restructuring activities. In *Education Reform for the '90s* the National School Boards Association offers guidelines for restructuring, technology, vocational education, personnel recruitment and employment practices, and early childhood practices. "The New Futures Initiative" by the Annie E. Casey Foundation is supporting restructuring projects ranging from $10-31 M in Dayton, OH; Lawrence, MA; Little Rock, AK; Pittsburgh, PA; and Savannah, GA. "Next Century Schools" by the RJR Nabisco Foundation is funding 15 restructuring projects and will fund a second round of competition. "Fighting Back" by the Robert Wood Johnson Foundation is funding 15 cities with one and two year planning grants at $26.4 M. Coca Cola Foundation is funding five projects for blacks and Hispanics at $50 M for the next ten years. The U.S. Department of Education funds several programs that are related to restructuring: Schools and Teachers, Family and School Partnership, Innovation in Education, Technology Education, Computer Based Instruction, and Star Schools; it will fund new research and devvelopment centers for five years.

How would you envision true choice world class information era learning communities of the future? What would be your multi-year plan of action to raise awareness and understanding of cultural diversity, science and technology, globalization of economies and international trade? Assume the human life cycle could be divided into three major time frames: early years, transitional years, and advanced years. The early childhood units could be a totally reconfigured set of relationships that now consist of preschool child care, health care, foster care, institutional care, and elementary schools. Upon completion of this "nongraded" configuation of caring and learning environments, a student and guardian could choose one of several distinctive configurations of environments to assist in the multiple phases of development and the transition from directed to self directed learning: CTE, PTD, CLL, PBL, or other education/training providers (ETP). Each student would pursue an IEP with mentoring from one or more significant others. This concept could continue into the advanced "postsecondary" years through a global network of consumers and providers using contemporary technology. Networks of learners would be supported via user friendly restructured higher education such as The Electronic University Network and the University of the World with 17 offices on five continents.

Laudable as PTD, CLL, and PBL may be, it would take genuine shared values and vision and the critical mass of

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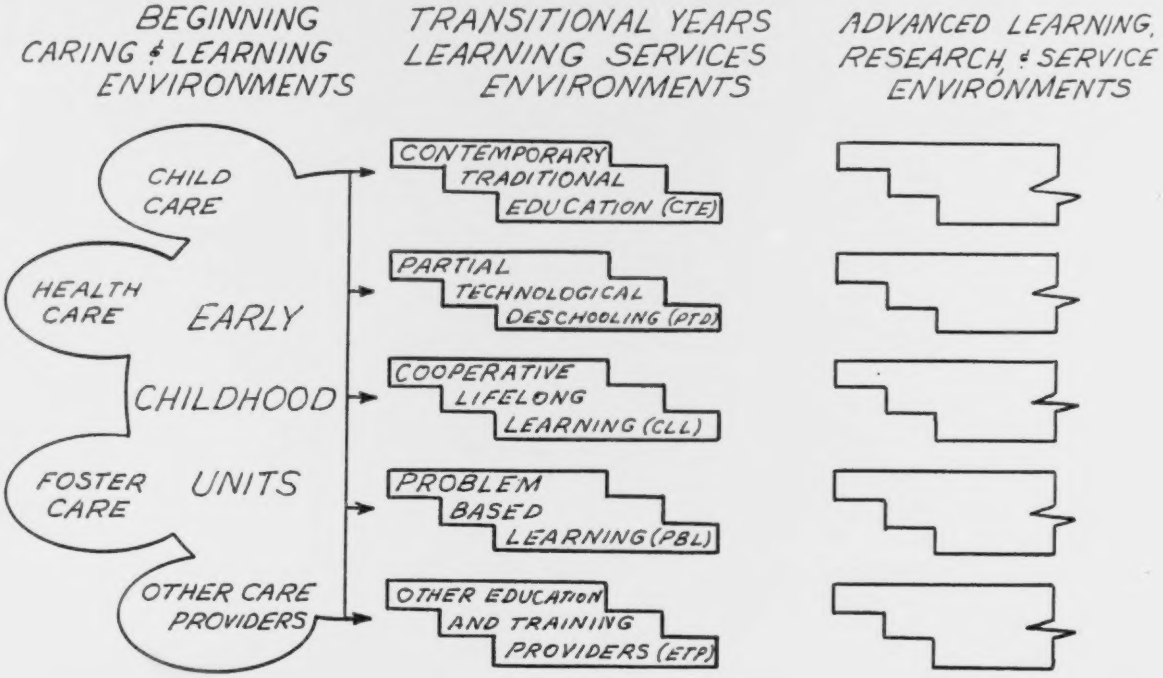
intellectual capital and other resources to develop and implement these totaly distinctive designs. What would be the nature of the governance structure, program structure, and organizational structure for these options? What would be the qualifications of the providers and the nature of the professional preparatory programs? U.S. consumers could have quality learning if they had access to free market choices such as CTE, PTD, CLL, PBL, and ETP. There are esstentially three major issues: tool, intellectual capital, and will. The tool to design and develop true choice is strategic planning matured far beyond the current modified management by objective version to creative strategic thinking. The intellectual capital exists in a few places where "community" describes far more than location -- it is unity of values and vision. The primary issue is will. We have the tool and the critical mass of intellectual capital to develop a world class information age learning enterprise with several distinctive instructional support environments. Such a project would require a commitment comparable to any of the big science programs such as the Superconducting Supercollider, Space Station, or Human Genome. It is a matter of will. We must raise the level of awareness of the enormous primacy of learning as the capital-forming industry of the advanced information era. Then, we must have the will to create visions of world class information era learning communities of the future and develop entirely new service environments.

INFO ERA LEARNING COMMUNITIES OF THE FUTURE


BEGINNING CARING & LEARNING ENVIRONMENTS
TRANSITIONAL YEARS LEARNING SERVICES ENVIRONMENTS
ADVANCED LEARNING, RESEARCH & SERVICE ENVIRONMENTS
CHILD CARE
HEALTH CARE
EARLY CHILDHOOD UNITS
FOSTER CARE
OTHER CARE PROVIDERS
CONTEMPORARY TRADITIONAL EDUCATION (CTE)
PARTIAL TECHNOLOGICAL DESCHOOLING (PTD)
COOPERATIVE LIFELONG LEARNING (CLL)
PROBLEM BASED LEARNING (PBL)
OTHER EDUCATION AND TRAINING PROVIDERS (ETP)

TO: Abraham S. Fischler
Ovid C. Lewis
John Scigliano
Richard Goldman
Abbey Manburg
Lloyd A. DuVall
J. Donald Stainer
Ross E. Moreton
Peter K. Mills

From: Warren H. Groff

RE: Vocational, Technical, and Occupational Education

DATE: June 6, 1990

We began teaching vocational, technical, and occupational education specialization seminars in the Programs in Higher Education in the new format in 1984. We had eight students. We taught Personnel - Human Resources Development in 1984, 1986, and 1988. We taught Emergence of VTO in 1985, 1987, and 1989. P-HRD evolved into the "Workforce of the Future" and E-VTO eovolved into the "Workplace of the Future". Each two year cycle is recorded in papers available through ERIC. A brief history of the first six years is on pages 8 and 9 of the spring 1990 issue of PHE's _Practitioners' News_.

P-HRD 1990 has 40+ students, including second year students from Canada, Korea, and Taiwan. P-HRD seminar materials were distributed in April and May. Enclosed is a copy of my welcome letter sent to each student and a copy of the early June and mid June memos sent to students.

My purpose in sharing this information with you is to keep you apprised about the progress being made in a program specialization that has great growth potential. Nations are restructuring their economy to match the emerging global economy -- European Common Market, Pacific Rim, etc. Industrialized nations are restructuring their educational systems. The industrialized nations that restructure their educational system to produce strategic global thinkers and the critical mass of master information technicians will have a competitive advantage in the 21st Century. VTO education of high quality must be an integral part of restructuring.

Most teachers and administrators at all levels of the educational pipeline are products of the academic track. Many persons do not understand the significance of the global, structural, economic change and the contribution that VTO programs of high quality can make to our society. I have shared this information with Cluster Coordinators in PHE. Please distribute this information to persons who can benefit from it.

TO: Cluster Coordinator RE: P-HRD 1990

FROM: Warren H. Groff DATE: June 1990

I trust you are having a good year. I look forward to working with you at the summer institute.

My purpose in writing is to apprise you primarily about progress in P-HRD 1990. Please share this information with your Research Associate. I began preparing for P-HRD 1990 at last year's summer institute. In August a memo was distributed on "Academic Credit for Participation in Contract Approved Activities". In December a memo was distributed on "Enrollment of Special Students in VTO Seminar - HRD". In March a cover memo, a P-HRD Study Guide, and other materials was distributed to you for distribution to students. Forty students are enrolled in P-HRD 1990, a significant increase over the eight students in 1984 during the first year of the revised format for specialization seminars.

Enclosed is a copy of the letter sent to each student and the single page enclosure. Also, enclosed is a copy of my early June 1990 memo to students. Most students are progressing nicely with the three required and two elective papers. Each paper consists of approximately two pages of a review of the literature and two pages of implications. Exceptions are the students who applied for credit for prior learning for one unit and/or participation in a professional development activity. Very few students have elected either option. After the five units are completed, each student completes a one page analysis of significant concepts and implications. This one page analysis is xeroxed and distributed to other students at the summer institute.

Also, enclosed is a copy of a "Student Progress" form on which to indicate status on practicums and the MARP. I hold individual conferences with students at the summer institute. Dr. Richard L, Fairley, Director of Higher Education Program Services of the U.S. Department of Education, will be participating at the summer institute from Thursday through Saturday. Please join the VTO group during one or all of the specialization meetings. Saturday will be particularly interesting with group presentations.

The spring issue of Practioners' News contains several items on which I will comment. A brief article on pages 8 and 9 describes the six years of the VTO specialization in the current format. HRD will become a core seminar beginning fall 1990 as indicated on page 7. We could accomodate a few more audit or special students in P-HRD 1990. The brochure for the five leadership workshops is at the printers and will be available for distribution soon.

TO: Abraham S. Fischler
Ovid C. Lewis
John Scigliano
Richard Goldman
Abbey Manburg
Lloyd A. DuVall
J. Donald Stainer
Ross E. Moreton
Peter K. Mills

From: Warren H. Groff

RE: Vocational, Technical, and Occupational Education

DATE: June 19, 1990

To keep you apprised of what I am doing in the VTO specialization in the Programs for Higher Education, I sent you a copy of the welcome letter I mailed to students and a copy of the early and mid June memos. Enclosed is a copy of the late June memo that is being sent to students as they complete an assignment and I return the evaluation form.

This memo discusses some basic concepts, summarizes a considerable number of restructuring initiatives, and concludes with a few paragraphs intended to help students think strategically about alternative caring and learning environments. Please share this information with persons who may have an interest in it. PHE Cluster Coordinators will be sent a copy of the memo with information about the progress being made by students in their cluster.

I welcome your reaction to my approach, the nurturing process and the content. Perhaps we can discuss it via telephone or at the PHE Summer Institute.

TO: Cluster Coordinators

FROM: Warren H. Groff

RE: P-HRD 1990

DATE: June 21, 1990

Enclosed is a copy of the late June memo that I will send students in P-HRD 1990. I hope receiving the three memos was helpful in understanding the P-HRD seminar.

P-HRD had three required units:
1. The Changing Nature of Society,
2. Stages of Human Development, and
3. Linking HRD to Organizational Development.

Each student could then pick two of six elective units:
4. HRD in the Technical Society Based on Information,
5. Use of Resources in the Personnel Function,
6. Organization and Admini. of the Personnel Function,
7. Legal Aspects of the Personnel Function,
8. Student Personnel Services, or
9. Leadership in Human Resources Development.

Or, a student could select another topic.

Each student could receive academic credit for prior learning for one unit and participation in a professional development activity for another unit. Some P-HRD students have written textbooks, submitted proposals which were funded, and served in leadership positions in professional associations. Of the 44 students in P-HRD 1990, 6 received credit for one unit for prior learning and 7 for participation in a professional development activity.

"Human Resources Development" will become a core seminar beginning this fall. The P-HRD specialization seminar study guide will be modified slightly for the HRD core seminar. Each student will have three papers: (1) audit HRD at the establishment in which the student works, (2) a vision of the future for the context in which the student works, and (3) a multi year HRD plan of action. Instructions, study guide, and textbooks should be available before the fall term starts. The three papers will be due one week before the meeting of the cluster. Dr. Robert Preziosi, Associate Dean of Academic Affairs in The Friedt School of Business and Entrepreneurship, and I would like to meet your students at the Summer Institute and discuss the seminar with them.

I welcome your reaction to my approach with P-HRD, nurturing process and content. I also welcome any suggests for HRD. Give me a call, drop me a note, or talk to me this summer.

RESOURCE MANUAL - PERSONNEL

HUMAN RESOURCES DEVELOPMENT

by

Warren H. Groff

INTRODUCTION

Students have suggested that a resource manual be available to enhance learning. The enclosed material is presented in four sections: (1) readings related to the seminar, (2) practicum and Major Applied Research Project ideas and survey instruments, (3) proposal development information and evaluation protocols, and (4) sources of information.

The section on readings includes several articles about the future and includes the "Professional Improvement Plan" of the Technology Education Association of Pennsylvania.

The section on practicum and MARP ideas includes a list of practicums by students in the vocational, technical, and occupational specialization since September 1989, a copy of a proposal by Keith Ragsdale, and numerous survey instruments. Case study and survey are research methods that are of great value to VTO.

The section on proposal development contains evaluation protocols for cooperative education, special education, handicapped persons, Higher Education Title III planning and development application grants, AACJC/Kellogg Beacon College applications, and $$ONLINE for National Council for Resource Development member institutions.

The section on other sources includes information about the U.S. Department of Labor, United Way of America, Economic Policy Institute, Council of State Policy and Planning Agencies and its Policy Academy on Families and Children At Risk, World Future Society, the Congressional Institute for the Future, Project 2061 of the American Association for the Advancement of Science, and the Society of Manufacturing Engineers. Also, enclosed are searches by the Technical Assistance for Special Populations Programs at the University of Illinois for (1) electronic networks - electronic delivery systems and (2) youth at-risk resources.

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I. Readings

Learning In The Future

HRD In The Information Age

Human Resources Department In The Year 2000

Into the 21st Century: LongTerm Trends Affecting the US

Health Care Tomorrow

Class of 2000

Outlook '90 and Beyond

Issues of the '90s

The Futures Center: Tomorrow's Science and Technology

The Future of American Business Firms

Dream Houses of the Future

Managing the Wired Household

Science, Technology, and Public Knowledge

Briding Technical to Academic Degrees: A Healthcare Example

Freed From Greed

The Coming Millenium And the Canadian Connection

Top Occupations, 1982 and 1995

The 21st Century Executive

Faculty Members as Classroom Researchers

Technology Education Association of Pennsylvania Professional Improvement Plan

Futures Commission Brief

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II. Practicum and MARP Ideas and Surveys

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Categories of Research

Roueche-Baker Integrated Model of Excellent Schools

Roueche-Baker Community College Excellent Model

Expenditure Subcategory Description

Identification of New and Anticipated Technology Affecting Nursing Practice in Austin Area Hospitals

Organizational Context for Teaching and Learning

Needs Assessment Questionnaire for Secretaries

Business, Industry, and Government Survey

National Study of Exemplary Teachers (U of Texas)

AACJC Survey of International Education and Training

Course Planning Exploration

Survey on Freshman Seminar Programs

A National Survey of Planning Perspectives and Practices

A Survey of Student Outcomes Measures Used to Assess Institutional Effectiveness

Part-time Faculty in Two-year Colleges

Part-time Faculty (Texas Coordinating Board)

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III. Proposal Development

Identification of Societal Needs and Review of Proposals

Comparison of Activities in Formative & Summative Evaluation

How to Evaluate Your Application

Cooperative Education Review Protocol

Special Education Programs Review Protocol

Handicapped Persons Discretionary Grants Review Protocol

Higher Education Act Title III Planning Grants

Higher Education Act Title III Development Grants

AACJC/Kellogg Beacon Colleges Iniative

$$ONLINE - The Grant Advisor for Your Personal Computer

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IV. Sources of Information

U.S. Department of Labor

United Way of America

Economic Policy Institute Publications

Council of State Policy and Planning Agencies

World Future Society

Center for Policy Research in Education

Congressional Institute of the Future

Project 2061, American Assn for the Advancement of Science

Technical Assistance for Special Populations Programs

Community College Futures: From Rhetoric to Reality

Dateline 2000: The New Higher Education Agenda

ERIC Documents

Institute For Alternative Futures

Office of Technology Assessment

Work In America Institute

Congressional Institute For The Future

World Future Society 6th General Asembly

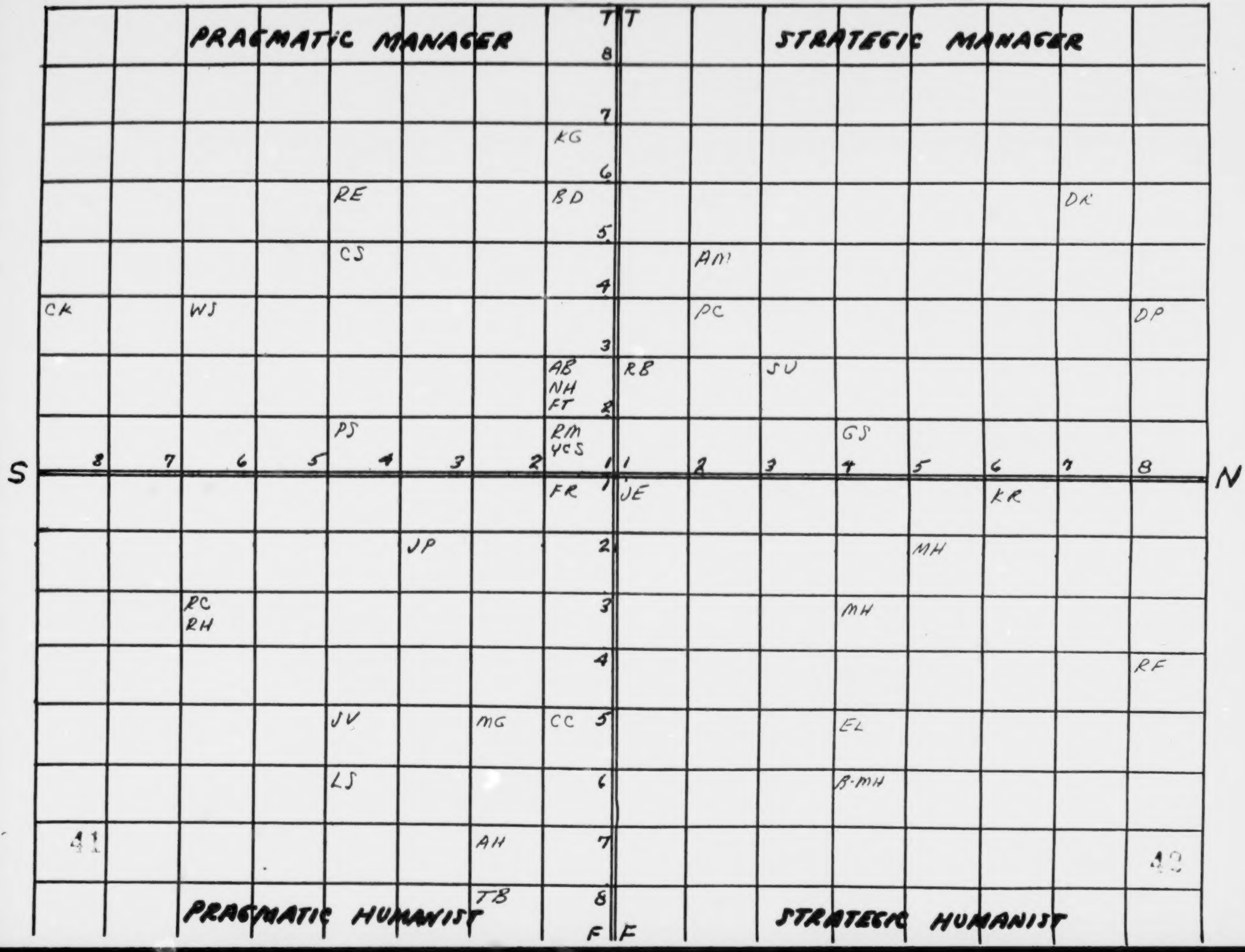
American Federation of Labor and Congress of Industrial Org.

ERIC Clearinghouses

ERIC Clearinghouse on Adult, Career, & Vocational Education

ERIC Reproduction Release Form

MYERS BRIGGS, P-HRD 1990



PROPOSALS

RATIONALE - WHY

GOALS & OBJECTIVES

- WHAT (OUTCOMES)

METHODOLOGY - HOW

EVALUATION

BUDGET

RATIONALE - WHY

ESSENTIAL TO VIABILITY

QUALITY OF LIFE

GLOBAL INFO SOCIETY

HUMANITARIAN THING TO DO

EQUALITY OF OPPORTUNITY

CONTEMPORARY MODEL/SYSTEM

RESEARCH AND THEORY

EXEMPLARY MODEL

RETURN ON INVESTMENT (ROI)

COMPARATIVE ADVANTAGE

NATIONAL - STATE - LOCAL

GOAL SETTING

ACHIEVABLE

CHALLENGING

MOTIVATING

REALISTIC

GOALS & OBJECTIVES

1. GOAL - LONG TERM

   OBJECTIVE - SHORT TERM

2. WHAT, NOT WHY & HOW

3. COMPONENTS OF A GOAL
   - "ENDS" ORIENTED
   - OUTCOMES FOCUSED

4. NUMBER OF GOALS - FEW
   - MAJOR TOPICS

5. OBJECTIVES - FEW PER GOAL
   - MINOR TOPICS

6. COMPONENTS OF OBJECTIVES

   - WHAT IS TO BE ACCOMPLISHED
   - TO WHAT EXTENT
   - BY WHEN

METHODOLOGY

OBJECTIVE 1 - FOCUS

1. PERSONNEL (EXISTING, NEW)
   NUMBER
   TYPE
   COMPETENCIES & SKILLS
   RELATIONSHIPS
   HUMAN RESOURCE DEVELOPMENT

2. TECHNOLOGY
   KNOW HOW
   HARD - SOFT
   NETWORKS
   INFO + TECH CENTERS

3. INTERESTABLISHMENT
   MISSION ALIGNMENT
   SOCIAL INFRASTRUCTURE
   DEGREE OF RELATIONSHIP

4. BUILDING - PLANT
   RENOVATION
   NEW
   PHYSICAL INFRASTRUCTURE

5. FINANCES
   OPERATING
   CAPITAL

A MULTI-YEAR FOR (CULTURAL DIVERSITY) (SCIENCE, TECHNOLOGY & SOCIETY) (PARENTING)

GOAL 1	OBJ. 1 -AWARENESS METH. EVAL. BUDGET	OBJ.2 - UNDERSTANDING METH. EVAL. BUDGET	OBJ.3 - COMMITMENT METH. EVAL. BUDGET
GOAL 2	OBJ. 1 METH. EVAL. BUDGET	OBJ. 2 METH. EVAL. BUDGET	OBJ.3 METH. EVAL. BUDGET
GOAL 3	OBJ.1 METH. EVAL. BUDGET	OBJ.2 METH. EVAL. BUDGET	OBJ.3 METH. EVAL. BUDGET

CULTURAL DIVERSITY

A. Assessment of Service Area
  1. Demographic and Social Characteristics
  2. Country of Origin
  3. Attitudes, Beliefs, and Values
  4. Perception of America, State, and Community

B. Audit of Establishment (School, Social Service Agency)
  1. Mission Statement
  2. Governance
    a. Board Composition
    b. Policies
  3. Primary Programs
  4. Support Programs
  5. Staff (Hiring, Orientation, Inservice, Appraisal)

C. Preservice Preparation of Personnel
  1. Core General Education Requirements
  2. Major Field Requirements
  3. Professional Requirements

D. Inservice Activities
  1. Hiring Orientation
  2. Throughout the Year

E. Learning Experiences
  1. Curriculum (Single Discipline or Interdisciplinary)
    a. Social Sciences (History, Sociology, etc)
    b. Languages
  2. Co-curricular
  3. Parental Involvement

F. Developing A Plan of Action - moving from cultural destructiveness, blindness, and incompetence TO cultural competence, proficiency, and responsiveness.

G. International Trade (Occupational Preparation)
  1. Language
  2. Politics
  3. Values and Attitudes
  4. Law
  5. Education
  6. Religion
  7. Technology and Material Culture
  8. Social Organization

CULTURAL DIVERSITY

	Year 1	Year 2	Year 3	Year 4	Year 5
Assessment of Service Area					
Audit of Establishment					
Preservice Preparation					
Inservice Activities					
Learning Experiences					
Establishment Plan of Action					
International Trade					

IMPORTANT ELEMENTS IN UNDERSTANDING OTHER COUNTRIES

LANGUAGE

- Spoken language
- Written language
- Official language
- Linguistic pluralism
- Language hierarchy
- International languages
- Mass media

POLITICS

- Nationalism
- Sovereignty
- Imperialism
- Power
- National interests
- Ideologies
- Political risk

VALUES AND ATTITUDES

- Toward time
  - achievement
  - work
  - wealth
  - change
  - scientific method
  - risk taking

LAW

- Common law
- Code law
- Foreign law
- Home country law
- Anti-trust policy
- International law
- Regulation

EDUCATION

- Formal education
- Vocational training
- Primary education
- Secondary education
- Higher education
- Litarery level
- Human resources Development

RELIGION

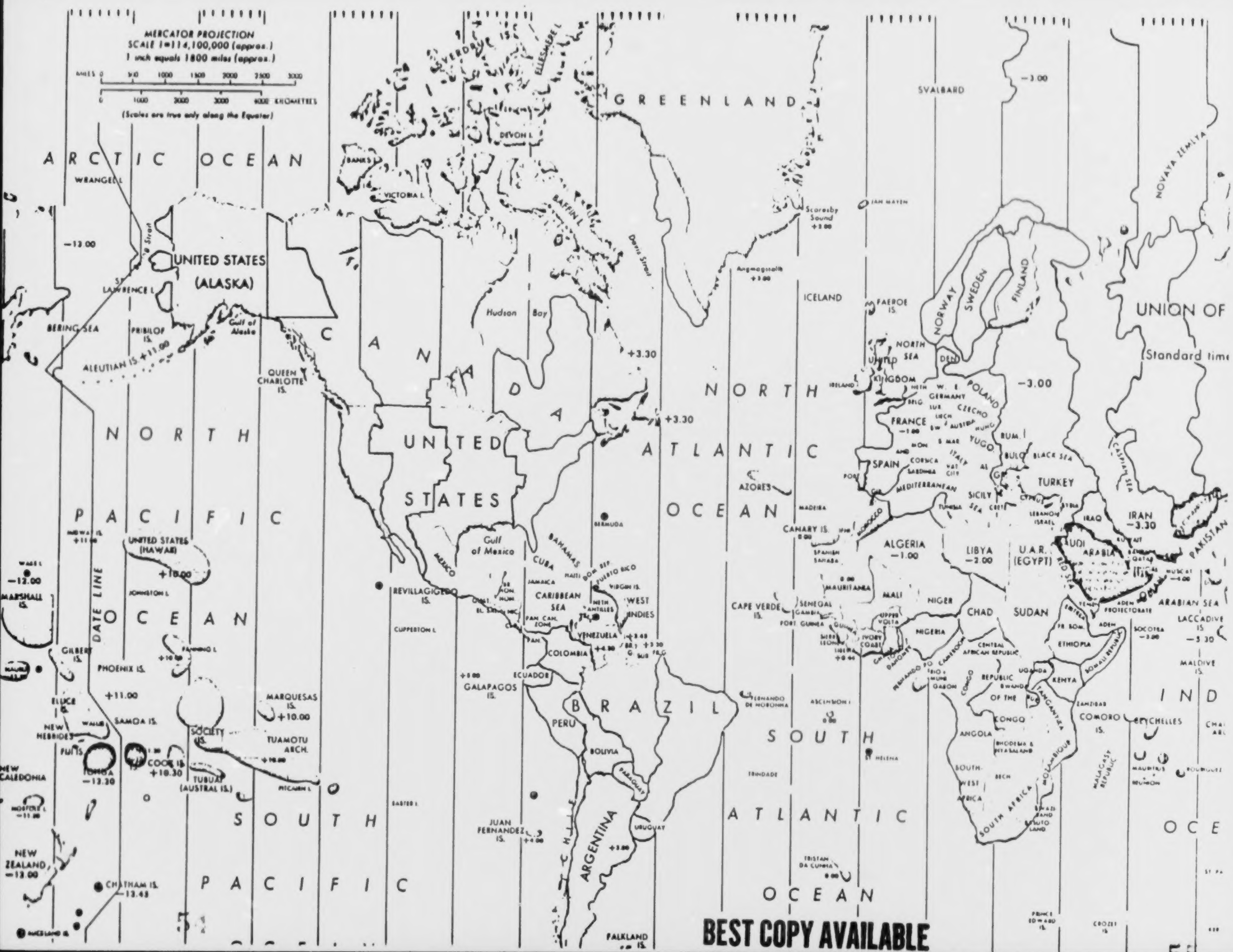
- Sacred Objects
- Philosophical system
- Beliefs and norms
- Prayer
- Taboos
- Holidays
- Rituals

TECHNOLOGY AND MATERIAL CULTURE

- Transportation
- Energy systems
- Tools and objects
- Communications
- Urbanization
- Science
- Invention

SOCIAL ORGANIZATION

- Kinship
- Social institutions
- Authority structures
- Interest groups
- Social mobility
- Sexual stratification
- Status systems



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Vision: Thinking Strategically About the 21st Century.

Presentation made at the Eighteenth Annual Summer Institute
of the Programs for Higher Education of Nova University
on the theme "Leadership For Innovation and Change"
by Warren H. Groff, July 24, 1990

Abstract

Between now and the year 2000, this nation will face challenges that will shape the future of the quality of life for the 21st Century. In the past, colleges and universities played a major role in shaping the future through instruction, research and service, primarily unilaterally and in a reactive mode. This role will not be sufficient in the future. New and expanded proactive relationships will be required between education, government and the private sector if the United States is to be a viable economy and society in the 21st Century.

Presentation Summary

"Leadership" has a focus on developing a **vision** to achieve **maximum synergism** through an **organization development** plan and a **human resources development** plan which is in harmony and synchronism with it. "Innovation" has a focus on the critical mass of resources - human, technology, fiscal, etc. for **inventions** to occur through a research, development, demonstration and dissemination paradigms and for **discoveries** to appear while creatively engaged in various stages of that process. "Change" has a focus primarily on two dimensions - magnitude and rate of speed; change today is **macro** and on the **fast track**.

Changes in **society** will be reflected by changes in **work** and then in **education**. Reforms in education have included the creation and spread of the common school, a period of school expansion, globalization of American education, a war on poverty through schools, and the current movement. The Contemporary Traditional Education (CTE) pipeline is intended to achieve equality and quality. (CTE) consists of academic college preparatory, vocational, and general tracks. The 1982 longitudinal study indicated that of 100 students moving through the contemporary traditional model, 34 graduated from the vocational track, 32 from the general track, 11 from the academic track, and 24 had dropped out of school. The 1989 National Assessment of Vocational Education indicated that academic track students take 3.17 credits in the vocational track. Over the past forty years, statewide governance systems have centralized numerous functions creating greater uniformity in (1) statutes, policies, and procedures as they relate to planning, financing, and reporting (2) academic affairs, (3) student affairs, and (4) business affairs.

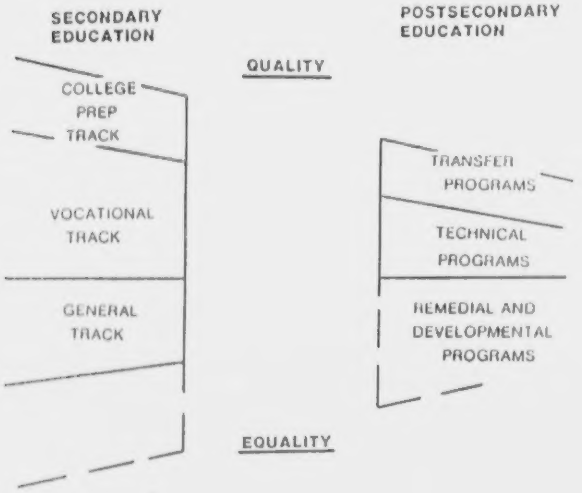
Management technology has evolved over the past fifty years from Program Evaluation and Review Technique (PERT); to Planning, Programming, and Budgeting Systems (PPBS); to Management By Objectives (MBO); to Planning, Managing, and Evaluation (PME); to Strategic Planning (SP). Strategic Planning consists of an **audit** of internal variables and an **assessment** of the external environment - demographic, social, economic, technological, political variables – to develop **visions** of the future in health and human services, business and industry, government and military, and education and training. Education is still in the early stages of using the technology of SP. Some institutions have improved the audit of internal variables; this is sometimes tied to program review. A few institutions have improved the assessment of a few external variables. Education has not seriously committed itself to developing visions of alternative futures, choices other than CTE.

Research indicates that leadership occurs at three levels - self, organization, and society - and consists of three steps: analysis and evaluation, creative futures visioning, and transforming visions into action. Research also indicates that there is a need for a "New Professional" - a visionary, proactive, transformational leader. The person needs conceptual skills in intramural strategic visioning of new caring and learning environments and human and technical skills in consensus building, shared responsibility, interagency cooperation, family and school partnerships, cultural diversity responsiveness, integrated development, and designing and implementing "Learning Communities."

Some communities are in the earliest stages of **fundamental restructuring**. Patterns of alternative education beyond CTE include partial technological deinstitutionalization, collaborative lifelong learning, problem based learning, and other education and training providers. Industrialized nations and newly industrialized countries are restructuring economies and education to be contenders for the "final four" in the new technical era. The states and countries that modernize and restructure education so that it is harmony and synchronization with the economy of which it is a part, and do it effectively and efficiently, will be the beneficiaries, not the victims, of the rapidly emerging technical era.

Eight of the most relevant overheads used in the presentation are displayed on the attachment sheet.

EQUALITY: DUAL MISSION PRIORITIES



STATE-WIDE GOVERNANCE SYSTEMS

DECENTRALIZED ——————————— CENTRALIZED

1950s 1960s 1970s 1980s

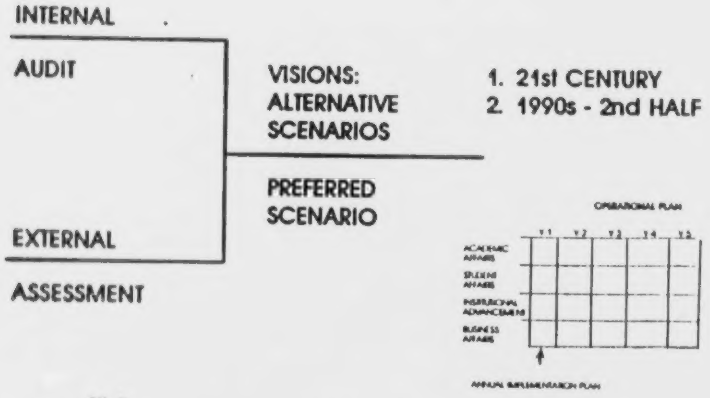
1. STATUTES — POLICIES — PROCEDURES —
   PLANNING — FINANCING — REPORTING

2. ACADEMIC AFFAIRS — MISSION PRIORITIES
   CURRICULUM
   PROGRAM REVIEW
   REMEDIAL AND DEVELOPMENTAL
   ECONOMIC DEVELOPMENT
   VALUE ADDED

3. STUDENT SERVICES — ASSESSMENT
   PARTICIPATION INCENTIVES

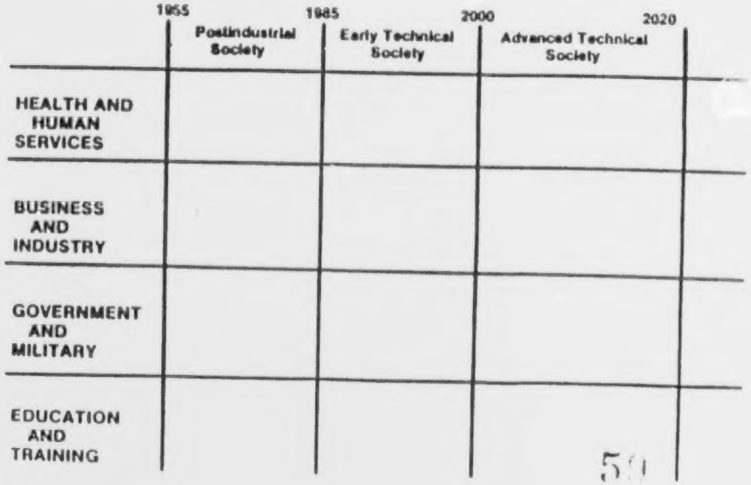
4. BUSINESS SERVICES — FUNDING FORMULA

STRATEGIC THINKING



OPERATIONAL PLANNING

VISIONS OF THE FUTURE



	1955 Postindustrial Society	1985 Early Technical Society	2000 Advanced Technical Society	2020
HEALTH AND HUMAN SERVICES				
BUSINESS AND INDUSTRY				
GOVERNMENT AND MILITARY				
EDUCATION AND TRAINING				

LEADERSHIP

ACTIVITIES

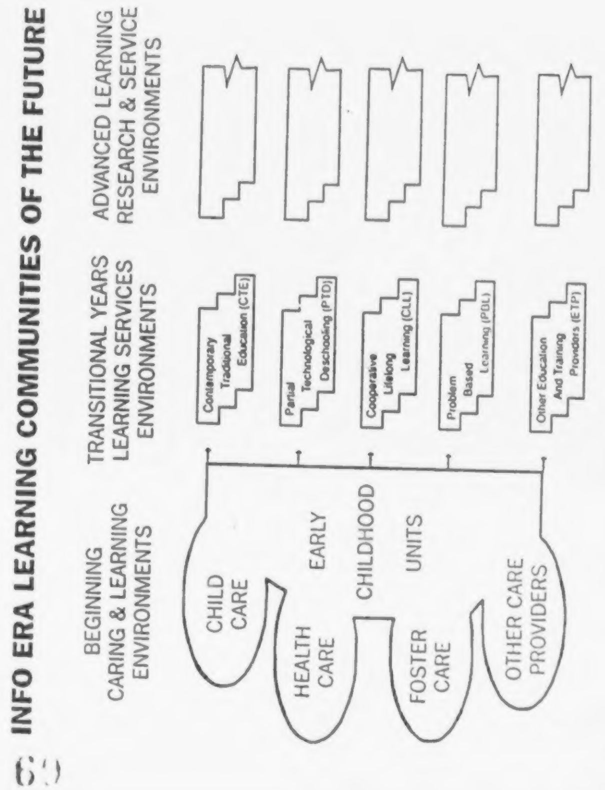
Levels	ANALYSIS AND EVALUATION	CREATIVE FUTURES VISIONING	TRANSFORM VISIONS TO ACTION
SELF			
ORGANIZATION			
SOCIETY			

THE NEW PROFESSIONAL - Visionary, Proactive, Transformational Leadership

1960s	1970s	1980s	1990s
Equality within a system			Intramural strategic planning strengths - Opportunities - Culture & Climate; Mission specialization; Program Review; Enrollment Management; Functional Analysis; Institutional Effectiveness
Excellence within a Subsystem			Intramural Strategic Visioning New Caring and Learning Environs
Founders of Public Service Agencies			Consensus Building Shared Responsibility Interagency Collaboration Family & School Partnership Cultural Diversity Responsive Integrated Development Learning Communities

ALTERNATIVE EDUCATION

1. Contemporary Traditional Education (CTE) Models
    - a. Within a CTE Classroom
    - b. Within a CTE School
    - c. Within a Single Subject - Math, Science, Humanities
    - d. Between Subjects - Math and Science, English, and Social Sciences
    - e. Between Tracks - Academic and Vocational
    - f. Between Schools Within a District - Level, Magnet Schools
    - g. Between Districts - "Choice"
    - h. Within a State - No. Carolina School of Arts
    - i. Special Focus - "At-Risk", Drop Out Prevention, Disciplines, Articulated, Differentiated/Developmental Curriculum, Learning Styles Pregnant Females, Substance Abusers, Cultural Diversity, Substance Abuse, Personal Abuse
    - j. Between Layers - Middle College High School
2. Partial Technological Deschooling (PTD) Models
    - a. Distant Learning Systems
    - b. Apple Classrooms of Tomorrow - Elementary Level
    - c. IBM's School of the Future - Secondary Level
    - d. The Education Utility
3. Collaborative Lifelong Learning (CLL) Models
    - a. Cooperative Education
    - b. Clinical Affiliations
    - c. Compacts - Academic Credit for Public Service
    - d. Partnerships
4. Problem Based Learning (PBL) Models
5. Other Education and Training Provider (ETP) Models
    - a. Nontraditional Private Providers
    - b. Corporate Sponsored Providers
    - c. Home Based Instruction, Correspondence
6. Role of Support Units
    - a. Library and Instructional Materials
    - b. Instructional Development and Media
    - c. Student Assessment, Counseling, Diagnostic Services
    - d. Administration
    - e. Boards-Advisory, Committees, Directors, Foundations, Trustees


INFO ERA LEARNING COMMUNITIES OF THE FUTURE
BEGINNING CARING & LEARNING ENVIRONMENTS
TRANSITIONAL YEARS LEARNING SERVICES ENVIRONMENTS
ADVANCED LEARNING RESEARCH & SERVICE ENVIRONMENTS
EARLY CHILDHOOD UNITS
CHILD CARE
HEALTH CARE
FOSTER CARE
OTHER CARE PROVIDERS
Contemporary Traditional Education (CTE)
Partial Technological Deschooling (PTD)
Cooperative Lifelong Learning (CLL)
Problem Based Learning (PBL)
Other Education And Training Providers (ETP)

"The Political and Personal Perils of Change-Agentry"

Presentation Made at the Eighteenth Annual Summer Institute
of the Programs for Higher Education of Nova University
on the Theme "Leadership for Innovation and Change"
by Warren H. Groff, July 25, 1990

Abstract

This session will provide participants with a theoretical overview of the change-agent process, examples of appropriate change strategies, and pitfalls to avoid. Panelists will share actual experiences and insights. The real and personal burden of attempting to bring about organizational change will be discussed. Group interaction is expected; time for questions will be allotted.

Presentation Summary

Leadership was introduced from a theoretical perspective. What is leadership? What does it mean to be a change-agent? **Leadership - change agent** is one of the PHE and student learning outcomes. "Leadership" has a focus on developing a **vision** to achieve **maximum synergism** through an **organization development** plan and a **human resources development** plan which is in harmony and synchronism with it. "Innovation" has a focus on the critical mass of resources - - human, technology, fiscal, etc. - - for **inventions** to occur through research, development, demonstration, and dissemination paradigms and for **discoveries** to appear while creatively engaged in various stages of that process. "Change" has a focus primarily on two dimensions - - magnitude and rate or speed; change today is **macro** and is on the **fast track.**

Research indicates that leadership occurs at three levels - - self, organization, and society - - and consists of three steps - - analysis and evolution, creative futures visioning, and transforming visions into action. Research also indicates that there is a need for a "New Professional" - - a visionary, proactive, transformational leader. This person needs conceptual skills in intermural strategic visioning of new and caring environments and human and technical skills in consensus building, shared responsibility, interagency cooperation, family and school partnerships, cultural diversity responsiveness, integrated development, and designing and implementing "Learning Communities."

The competencies and skills of change-agentry include an understanding of the theoretical and philosophical aspects of leadership; societal factors; research, development, and evaluation; human resources development; curriculum and learning; governance and management; politics, law, and economics; and the past, present, and future. A change agent must also understand creativity and career life cycle.

The presenter then interjected his perspective as a role model by elaborating on "Leadership in Designing and Implementing ' The Learning Community of the Future'." Reference was made to the contemporary traditional educational model, the eight big states, the divisions of the American Vocational Association, and eight patterns for integrating academic and vocational education to achieve "The Cunning Hand, The Cultured Mind."

An overview was presented about eras and education. During the agricultural era, the U.S. had formal education for the elite destined for the professions and apprenticeship training for persons destined to become craftsmen. During the industrial era, vocational and general tracks were added to formal education. During the technical era several distinctive unique forms of alternative education will be developed to provide true choice to the contemporary traditional model. These alternatives include partial technological deschooling, cooperative lifelong learning, problem based learning, and other education and training providers. The decade of the 80's could be labeled "modernization." The decade of the 90's will be fundamental restructuring of education and human services; restructuring is already underway.

The presentation concluded with a brief statement on the need for problem and solution based learning models delivered through electronic highways. When asked in February 1990 what the Higher Education Director's Team would do after current projects, Dr. Ross E. Moreton stated, "Start over again." Research provides professional educators who design doctoral programs and postdoctoral learning experiences with the philosophical and theoretical underpinnings to form conceptual frameworks about learning systems of the future. Professional educators must then format a delivery system to produce the competent "New Professionals" who will staff systems in the 21st century. The New Professional will have to be able to demonstrate visionary, proactive, transformational leadership. "We must be the change we wish to see in the world" - - Ghandi.

Six of the most relevant overheads used in the presentation are displayed on the attached sheet.

1531 Peabody Avenue
Memphis, TN 38104
August 4, 1990

U. C. More Clearly
2020 Vision Ecstacy Pinnacle
Information Era, World 20001

Dear U. C.:

Congratulations. You have successfully completed the synthesis paper for P-HRD, an important learning experience in the Nova University Programs for Higher Education. Hopefully, this problem-solving process based on the three stages of leadership gave you insights into solution-based education that can lead to improved quality of life.

Enclosed is a copy of the "Post Summer Institute Memo" which is intended to help you focus on leadership and wholistic planning for 1990-91. Integrate job responsibilities and PHE requirements. Specify problems in your work context and consider them as opportunities for practicums and MARPs. Also, enclosed is a P-HRD evaluation form. Of particular interest is feedback about the approach used to develop a plan of action during the Summer Institute, especially if you plan to submit the proposal to a funding agency.

My teaching and consulting schedule takes me to many cities. Although my primary focus must be on specific tasks, I shall always attempt to find time for students in VTO and PHE. We anticipate that additional workshops will be generated from the "Leadership For Innovation And Change" workshops. I will distribute a January and April memo through the Cluster Coordinators so that the memo also reaches new students. I will be online sometime during the year. A local Art Center will accept FAX for me (901) 276-0270.

The world is going through a paradigm shift somewhat similar to the transition from an agricultural era to the industrial era. During that transition, vocational education was institutionalized alongside academic education. Today, a few communities are in the earliest stages of **fundamental restructuring** -- realigning existing establishments and creating new ones. The change is different in magnitude and speed -- macro and fast. VTO has a unique role to play in this shift. It is a pleasure working with you.

Sincerely,

Warren H. Groff
901-725-5287

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Post Summer Institute Memo

The 1990 Summer Institute for the Programs in Higher Education on the theme "Leadership for Innovation and Change" provided an outstanding opportunity to uniquely combine professional development and fellowship with friends from around the world. Research indicates that leadership occurs at three levels -- self, organization, and society -- and consists of three steps -- analysis and evaluation, futures visioning, and transforming visions into action. The study of leadership is not new. Researchers studied Horace Mann -- his vision, what he did, how he did it, his characteristics, etc. Researchers also documented leadership in the late 1800s and early 1900s that ultimately caused/led to the evolution of academic and vocational education or tracks. Researchers also documented leadership in the Sputnik era that ultimately led to such things as the (1) application of the Research to Development to Demonstration to Dissemination Paradigm to education and (2) creation of alternative higher education such as University Without Walls, Empire State, Evergreen State, Governor's State, Walden University, Nova University, etc. Interest in leadership extends to attempts to understand management technology such as strategic planning and vision quest and its role in influencing direction toward improved equality and quality of life. What is new about the study of leadership relates to fundamental restructuring.

Each student was provided an opportunity to concentrate on an area of research and study prior to the Summer Institute, synthesize significant concepts and their implications, and share ideas with peers. The Summer Institute sessions were intended to (1) help clarify visions -- Lewis, Fischler, Fairley, etc; (2) nurture and demonstrate change agentry skills -- Davitt, Herrscher, Zierath, etc; and (3) enhance skills to survive the rigorous PHE-VTO program requirments -- Barrett, Mills, Poliner, Robinson, etc. The Summer Institute Resource Manual was intended primarily to help clarify leadership skills relative to visions. The P-HRD specialization seminar sessions were structured around the components of a proposal for a action plan: Sunday - overview, Monday - rationale (WHY), Tuesday - goals and objectives (WHAT), Wednesday - methodology (HOW), Thursday - evaluation, Friday - budget, and Saturday - presentation and critique. Each student concentrated on developing an action plan in one of six groups: (1) health, (2) secondary education, (3) distant learning through technology, (4) business, (5) engineering, and (6) administration. Throughout the week individual sessions were held with the seminar leader to elaborate on "Student Progress" in development and implementation of an Individual Education Plan. The individual sessions for first year students were fifteen minutes and for second year students were thirty minutes. The P-HRD Resource Manual was intended to help clarify visions and transform visions into action. The

Resource Manual contained (1) readings related to the seminar, (2) practicum and Major Applied Research Project ideas and survey instruments, (3) proposal development information and evaluation protocols, and (4) sources of information. Each student should have developed her/his (1) **HRD** plan and (2) part of an **Organization Development** plan.

As 1990-91 progresses, **plan your work** and **work your plan**. Look at the year wholistically -- fall, winter, spring, and summer. Plan your work listing job responsibilities and PHE program requirments. One student will (1) manage a department, (2) chair an institutional self study for reaffirmation of the Southern Association of Colleges and Schools, (3) revise an existing textbook, and (4) has been asked to write another textbook. Attempt to match job priorities and PHE requirments. A "Planning Worksheet" is attached.

"Emergence of Vocational, Technical, and Occupational Education" will follow the P-HRD format. Materials will be distributed in early spring. E-VTO units are as follows:
1. Evolution of VTO in America.
2. Vocational Education In The Industrial Society.
3. Redesign of the Education System **(REQUIRED)**.
4. The Emergence of the Techical Society **(REQUIRED)**.
5. Economic Development and Revitalization
6. Studies About Education **(REQUIRED)**.
7. Intellectual Capital Formation.

Each student must complete three required and two elective units. Each student can receive academic credit for one unit for prior learning and for a second unit through participation in professional development activity. A **letter** requesting either or both can be sent to me anytime during the year. Provide enough detail so this part of the seminar learning contract can be authorized in one transaction. Papers will consist of approximately two pages of "Review of the Literature" and two pages of "Implications" with other essential things in appendices.

Units 5 and 6 are extremely important. The 1980s could be labeled "modernization" and the 1990s "restructuring." The economies of the world are restructuring. Restructuring is reflected in countries, in business, in workplaces, and every institution in society -- particularly the family. The industrial nations of the world are critically examining contemporary traditional schools and colleges. A few municipalities are in the very earliest stages of fundamental restructuring of basic institutions and creating alternative education choices such as partial technological deschooling, collaborative lifelong learning, problem based learning, and other models. The newly industrialized countries of the Pacific Rim are entering a period of expanded schooling and critically analyzing the educational structures of industrialized nations to replicate the best innovations and not duplicate the worst features. What are the connections between changes in society, the workplace, and education and training? Already there are eight different patterns for integrating vocational and academic education that have emerged within the contemporary traditional educational pipeline to achieve "The Cunning Hand, The Cultured Mind."

E-VTO deals primarily with the **workplace of the future** with emphasis on **technology.** One student in E-VTO 1989 surveyed technology brought on-line by hospitals in the college's service area to help develop specifications for a nursing and allied health laboratory. That same student chaired one of twelve strategic planning committees for one of the hospitals. Begin to create files on technology. Contact the Office of Technology Assessment, Work In America Institute, and Institutional Projects Funded by the Office of Educational Research and Improvement (1-800-424-1616). Libraries of the future and electronic highways are essential in a technical era based on communications.

The E-VTO Resource Manual will highlight units 5, 6, and 7. Send me materials that could be considered for inclusion -- articles, survey instruments, resources, etc. I am particularly interested in (1) economic development and revitalization; (2) reform legislation that impacts on work setting -- health and human services, business and industry, military and government, and education and training; and (3) education restructuring such as conversion of AVTS to postsecondary institutes in PA and networking systems.

First year students will be admitted to PHE throughout the year. Please make fellow VTO peers welcome and explain the philosophy and nature of the practitioner-oriented, problem-solving, field-based approach to the delivery of instruction. Please explain the focus of the VTO **workplace** and **workforce** specialization seminars and help as mentors and significant others. E-VTO can be taken for credit or audit by someone (a) not in a doctoral program but meeting admissions requirments for such a program, (b) in a doctoral program at a university who would like to transfer the credit, or (c) who has completed a doctoral program and wants this additional competency. Invite other persons to join us. Through collaboration Nova's programs will become first in solution-based education based on sound theory and research. We shall lead the way "TOWARD THE 21st CENTURY" in rebuilding communities and neighborhoods through "Learning Communities of the Future."

- - - - - - - - - -

I believe that there exists a possibility for a type of organization so fundamentally more creative than the traditional, authoritarian hierachy that it is only dimly reflected, even in the most successful, current practitioners of new management principles.

- Peter Senge, Sloan School of Management, MIT

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Planning Worksheet, 1990-91

Job

1. Identify and priorize problems
2. Match problems with program requirments
3. Create files for information

PHE Program

	Fall	Winter	Spring	Summer
Seminars				
Session 1				
Session 2				
Session 3				
Practicums				
Idea 1				
Idea 2				
Idea 3				
Files				
1				
2				
3				
4				
5				
Comp Prep				
Synthesize				
Interpret				
MARP Ideas				
Idea 1				
Idea 2				
Network With Others				

TO: Abraham S. Fischler
Ovid C. Lewis
John Scigliano
Richard Goldman
Ross E. Moreton
Abbey Manburg
Lloyd A. DuVall
J. Donald Stainer
Peter K. Mills
Thomas H. Quinlan

From: Warren H. Groff

RE: Post Summer Institute VTO Memo

DATE: August 8, 1990

This was the best year for VTO by whatever criteria one would use to measure effectiveness. We have 44 students from Canada, Korea, Taiwan, and the U.S. The synthesis papers will be interesting to read.

Since 1984, the first year of the new format for specialization seminars, P-HRD and E-VTO had three required and two elective units of research and study prior to the Summer Institute. A student could receive academic credit for one unit for prior learning. Planning for P-HRD 1990 began at the 1989 Summer Institute by initiating the awarding of academic credit for one of the five units for participating in a professional development activity. Many of the VTO students are working on important projects that match objectives in seminars. Then, the policy was approved to open VTO to special students. Although no special students enrolled in P-HRD, several students who will be in the third year have indicated they want the VTO credential on their transcript. I hope we can attract a few graduates from other Nova programs.

The P-HRD Study Guide was revised and a P-HRD Resource Manual was developed with four sections: (1) readings related to the seminar, (2) practicum and Major Applied Research Project ideas and survey instruments, (3) proposal development information and protocols, and (4) sources of information.

The welcome letter and memos were shared with administrators at Nova and Cluster Coordinators. I have enclosed a copy of the letter, evaluation form, and memo that are being sent to each student upon completion of the synthesis paper. The letter and memo synthesize P-HRD and the Summer Institute and are intended to assist each student transition to 1990-91. I will distribute a January and April memo through Cluster Coordinators so that memos reach new VTO students. I will send you a copy of the memos.

The student evaluation asked a few simple questions:
1. What did you like best? Why?
2. What did you like least? Why?
3. What would you change? Why? How?

4. Comment on how I handled the seminar.
I welcome your own feedback about VTO, including the memos. VTO attacts students from secondary and postsecondary settings, health and human services, business and industry, and government and military. It has an role to play in revitalizing education and the economy.

The curriculum changes for which I have responsibility are on schedule. The P-HRD Study Guide has been converted to a Study Guide for the core seminar "Human Resources Development." Dr. Robert Preziosi, Associate Dean for Academic Affairs of the Friedt School of Business and Entrepreneurship, and I will teach HRD where "Learning Theory" was scheduled in 1990-91. We will evaluate the pilot year and work with other persons to develop the seminar for 1991-92. Students who had P-HRD 1990 will be taking "Leadership" with me via independent study during 1990-91. A team of persons will be developing the "Leadership" core seminar during the year for implementation where Practicum Services is scheduled in 1991-92. A VTO proposal has been submitted to Ross Moreton for the seminar to replace P-HRD: the proposal is based on the idea that one seminar should focus on the **workforce** and the second seminar should focus on the **workplace** which is E-VTO. Several persons will be providing input to the proposal.

I am a Practicum Report Evaluator for VTO. I will also serve as PRE for HRD and Leadership during the period of curriculum revision. I am also working with two MARP advisees, both of whom are VTO students from West Florida.

The "Leadership For Innovation And Change" workshops represent an opportunity for Nova to demonstrate some of its distinctiveness. The Summer Institute is a unique feature. Knowledge gained from research and presentations will be packaged so that LIC participants will have a better understanding of levels of leadership -- self, organization, and society -- and steps of leadership -- analysis and evaluation, creative futures visioning, and transforming visions into action. I am interested in self appraisal and organization appraisal instruments that have been helpful in a variety of contexts.

Also, enclosed is a summary of my two Summer Institute presentations and the one page handout given to attendees.

It is a pleasure working with you. Thanks for your help.

TO: Cluster Coordinators

FROM: Warren H. Groff

RE: P-HRD 1990 And Beyond

DATE: August 8, 1990

This was the best year for VTO by whatever criteria one would use to measure effectiveness.

Since 1984, the first year of the new format for specialization seminars, P-HRD and E-VTO had three required and two elective units of research and study prior to the Summer Institute. A student could receive academic credit for one unit for prior learning. Planning for P-HRD 1990 began at the 1989 Summer Institute by initiating the awarding of academic credit for one of the five units for participating in a professional development activity. Many of the VTO students are working on important projects that match objectives in seminars. Then, the policy was approved to open VTO to special students. Although no special students enrolled in P-HRD, several students who will be in the third year have indicated they want the VTO credential on their transcript.

The P-HRD Study Guide was revised and a P-HRD Resource Manual was developed with four sections: (1) readings related to the seminar, (2) practicum and Major Applied Research Project ideas and survey instruments, (3) proposal development information and protocols, and (4) sources of information. Ask a VTO student for a copy of the P-HRD Resource Manual and examine it.

The welcome letter and memos were shared with administrators at Nova and Cluster Coordinators. I have enclosed a copy of the letter, evaluation form, and memo that are being sent to each student upon completion of the synthesis paper. The letter and memo synthesize P-HRD and the Summer Institute and are intended to assist each student transition to 1990-91. I will distribute a January and April memo through Cluster Coordinators so that memos reach new VTO students.

I am particularly interested in your feedback. The student evaluation asked a few simple questions:
1. What did you like best? Why?
2. What did you like least? Why?
3. What would you change? Why? How?
4. Comment on how I handled the seminar.
I welcome your own feedback about VTO, as well as comments from your Local Research Associate.

The curriculum changes for which I have responsibility are on schedule. The P-HRD Study Guide has been converted to a

Study Guide for the core seminar "Human Resources Development." Dr. Robert Preziosi, Associate Dean for Academic Affairs of the Friedt School of Business and Entrepreneurship, and I will teach HRD where "Learning Theory" was scheduled in 1990-91. We will evaluate the pilot year and work with other persons to develop the seminar for 1991-92. Students who had P-HRD 1990 will be taking "Leadership" with me via independent study during 1990-91. A team of persons will be developing the "Leadership" core seminar during the year for implementation where Practicum Services is scheduled in 1991-92. A VTO proposal has been submitted to Ross Moreton for the seminar to replace P-HRD; the proposal is based on the idea that one seminar should focus on the **workforce** and the second seminar should focus on the **workplace** which is E-VTO. Several persons will be providing input to the proposal.

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Also, enclosed is a summary of my two Summer Institute presentations and the one page handout given to attendees.

It is a pleasure working with you. Thanks for your help.

SEMINAR EVALUATION

1. What did you like best? Why?

2. What did you like least? Why?

3. What would you change? Why? How?

4. Comment on how I handled the seminar.

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Emergence of Voc, Tech, Occupational Ed, 1991

1531 Peabody Avenue
Memphis, TN 38104
June , 1991

U. R. Welcome
2020 Vision Ecstacy Pinnacle
Information Era, World 20001

Dear U. R.:

Welcome to E-VTO 1991. I trust you having a good year and making excellent progress on Nova activities.

The Study Guide "Preface" is an overview of E-VTO which leads to your contract. Enclosed is a signed copy of your contract. Please complete the enclosed "Student Progress" sheet and send it to me with your next paper. Also, save HRD and technology articles such as the ones enclosed.

E-VTO and the 1991 Summer Institute will be very exciting. Research indicates that leadership consists of three primary activities: (1) analyzing and evaluating, (2) creating visions of the future, and (3) transforming visions into multi-year action plans. Your E-VTO papers will be on analysis and evaluation. Summer Institute presenters will help clarify visions of the future. E-VTO Summer Institute work sessions will focus on developing action plans.

Most of last year's first year students will be returning. In addition, many new students will participate in E-VTO.

I want to express my enthusiasm in working with you. We are living in a historical era. We did not live during the transition from an agricultural era to an industrial era. We are living, however, during a global, economic, structural transition with greater and more far reaching implications. We have the opportunity to provide creative visionary leadership. I look forward to working with you.

Sincerely,

Warren H. Groff
901-725-5287

PERSONAL DATA VARIABLES

Please Print Plainly

_______________, _______________
Last Name First Name

Sex ________
M or F

Age ________

____
Number and Street

_______________, ________ ________
City State Zip

Home Telephone (   ) ______________
Work Telephone (   ) ______________

Cultural Background ______________
(White, Black, Hispanic, Asian, N. Am.)

State of Origin ______________

Undergraduate Major ______________
Masters Major ______________
Current Occupation ______________
If Educator, Grade(s) Level ________
Number of Children ______
Number of Grandchildren ______

Status ______
1. Single
2. Married
3. Separated
4. Divorced
5. Remarried

Myers Briggs Planning Preference

E	I	S	N	T	F	P	J
_	_	_	_	_	_	_	_

Kolb Learning Styles Inventory Scores
Concrete Experience Score ______
Reflective Observation Score ______
Abstract Conceptualization Score ______
Active Experimentation Score ______

Hemisphericity
Right ____
Left ____
Integrated ____

Student Progress

Please indicate the term you started the Nova program, the sequence you took core and specialization seminars, and practicum status -- ideas, proposals accepted, accepted proposals being worked on, and completed practicums. Please return the completed progress report with one of your assignments later this month.

____________________, ________________________
Last Name (Print) First Name (Print)

Term program started______________________,19___
Fall, Winter, Spring

Seminar	Practicum or Idea (Indicate Status)
1. ________________	
2. ________________	
3. ________________	
4. ________________	
5. ________________	
6. ________________	
7. ________________	

Ideas for Major Applied Research Project:

SKILLS

70% on jobs need training, says report

By Lee Mitgang
The Associated Press

NEW YORK — America will lose its global economic race while a majority of U.S. workers face lifetimes of low-paying jobs unless drastic changes are made in training workers, a commission warned Monday.

"What we are facing is an economic cliff of sorts. And the front line working people of America are about to fall off it," said the study by a 34-member Commission on the Skills of the American Work Force.

Seventy percent of the workforce — clerks, secretaries, machinists, drivers, farm workers and other noncollege-educated workers — "will see their dreams slip away" unless society invests more in improving skills in school and on the job, said the report.

The report, "America's Choice: High Skills Or Low Wages," called on business, schools and government to overhaul the "haphazard, incoherent and bureaucratic" system of job training.

The commission was led by Bill Brock and Ray Marshall, respectively U.S. labor secretaries under presidents Reagan and Carter. Brock was formerly a U.S. senator from Tennessee.

Among key recommendations:

■ A federal requirement that U.S. firms devote 1 percent of payroll to skills training.

■ A mandate that no one under age 18 be allowed to hold a job until meeting a new set of national educational standards "as tough as any in the world."

■ Establishment of a network of "youth centers" designed to ensure that dropouts and others unable to meet the standards on time in regular schools are helped to do so later. Such a system could cost $8 billion annually if all current dropouts were served, the report estimated.

The study was co-written by Ira Magaziner, international business expert, and Marc Tucker, president of the National Center on Education and the Economy.

It was based on 2,000 interviews at more than 550 companies and agencies since July in the United States, Germany, Sweden, Denmark, Ireland, Japan and Singapore.

Business groups, education leaders and politicians hailed the report as a landmark.

Albert Shanker, president of the American Federation of Teachers, called it "the most significant report of the whole reform movement."

"The Commission ... has found the necessary remedies for America's lagging productivity," said Stephen Blair, president of the National Association of Trade and Technical Schools.

The study was funded with $500,000 in grants from the Carnegie Corp. of New York, New York state, and Towers Perrin, a New York-based consulting firm.

"We have the worst system of any major country for educating the noncollege bound," Marshall told reporters.

The report recommended that all students be required to work toward a Certificate of Initial Mastery that would certify high levels of competence in math, English and other basics. Students would demonstrate skills through specific tasks rather than standardized tests.

U.S. firms spend $30 billion a year training workers, but only one-third is spent on noncollege-educated employees, the report found.

The report found that most U.S. firms cling to outmoded production models where workers have little decision-making authority and are trained only for dead-end jobs.

The result: U.S. worker productivity is less than half what it was 15 years ago.

COMMERCIAL APPEAL
JUNE 19, 1990, B-7

National Center on [illegible] & the [illegible]
[illegible]

E-VTO 1991 Early June Memo

Industrialized nations and newly industrialized countries are exiting the postindustrial era, progressing through the early technical era, and entering an advanced technical era. We don't fully understand how the advanced technical era will evolve. It is possible to anticipate many things that will happen by understaning the past and the present. Economies around the world are changing. So too must the human resource development systems change to produce the workforce and new professionals who will go beyond only modernizing workplaces to creating entirely new caring and learning environments. VTO will become increasingly more important. With regard to leadership development, the new professional will need intermural strategic visioning skills and competencies in consensus building, interagency collarboration, and cultural diversity responsiveness.

The E-VTO Study Guide with its two appendices and texts by Dale Parnell and Al Faulter provide good material about the past, present, and future so that you will understand workforce and workplace issues. Attached ia a list of my ERIC documents on strategic planning, HRD, leadership, community and economic development, technology transfer, etc. You will be required to submit a minimum of five pages of relevant material to me by July 10 and also bring 10 copies for other students in your small group at the Summer Institute (SI). I will produce a Resource Manual containing sections on reading related to the seminar, practicum and MARP ideas and survey instruments, proposal development information and evaluation protocols, restructuring, and sources of information. If you want to submit something for inclusion, it must reach me by June 10.

Please complete the top half of the enclosed "Personal Data Variables" and send it to me. We will complete at the SI.

After you write your preliminary papers, develop a one page analysis of significant concepts and implications like the one enclosed by Yng-chien Sheu. Send me one (1) copy of the analysis by July 10 and bring 40 copies to the SI for distribution to other students. (Jerry Sheu has been appointed chairman of the preparatory committee on the Graphic Arts Technical Research Center and reappointed as Director of the Vocational Industrial Steering Committee.)

Call 1-800-222-4922 and ask to be placed on the mailing list to receive the U.S. Dept. of Ed. Office of Educational Research and Improvement OERI Bulletin and for a list of "Educational Research and Development Centers."

Call 1-800-872-5327 and ask for a copy of America 2000.

Ask your Congressperson for *The National Educational Goals* A Second Report to the Nation's Governors, Feb 4, 1991, and the report of the National Education Goals Panel, Mar 25, 91

The following organizations are relevant to VTO:
National Center on the Educational Quality of the Workforce
4200 Pine Street, The Univesity of Pennsylvania
Philadelphia, Pennsylvania 19104-4090 215-898-4585

Center on Education and Training for Employment and the
ERIC Clearninghouse on Adult, Career, & Vocational Education
The Ohio State University, 1900 Kenny Road
Columbus, Ohio 43210-1090 800-848-4815

National Center for Research in Vocational Education
University of California at Berkeley
2150 Shattuck Avenue, Suite 600
Berkeley, CA 94704-1306 415-642-4004

The Nat. Institute for Staff and Organizational Dev.(NISOD)
Community College Leadership Program
The University of Texas at Austin, EDB 348
Austin TX 78712 512-471-7545

The Center for Occupational Research and Development (CORD)
and National Coalition of Advanced Technology Centers
601-C Lake Air Drive
Waco, TX 76710 800-772-8756

National Staff Development Council
P.O. Box 240
Oxford, OH 45056 800-727-7288

Dr. Richard L. Fairley and Brian Satterlee will attend SI. Brian will share his MARP on program review on Wed. at SI.

My schedule is tight. I am helping Mercer County Community College develop a stratgic plan to which PHE students will write practicums and MARPs. I am completing Leadership with the first National (Technology Intensive) Cluster in the Child and Youth Studies Program. My e-mail code is *groffw*. I am helping the Nebraska Technical Community College Association implement strategic planning. I am providing technical assistance to Building Community Partnership grantees funded by the Office of Substance Abuse Prevention of the U.S. Dept. of Health and Human Services. I am conducting the one week Snowmass Institute on Strategic Planning July 14-19. If you know anyone at your institution interested in participating in the strategic planning or enrollment management institutes, they can obtain information from The Snowmass Institute 619-755-5651. You can FAX things to 901-276-0270; *you* pay at both ends.

Rallying cry of the '90s

By Alissa J. Rubin

WASHINGTON — Americans felt proud of the country's technological prowess when Patriot missiles began shooting down deadly Iraqi Scuds. They may not be so pleased to know that, to build those Patriots today, defense contractors must rely on computer parts made in Japan.

The vaunted Patriot technology not only represents the United States' military and scientific expertise but symbolizes the country's widening technology gap.

DRIVEN BY THIS concern, a formidable array of interest groups — ranging from aerospace and computer-chip manufacturers to tool- and die-makers — is seeking to reframe the national debate on technology development. They have latched onto a "competitiveness" slogan that puts virtually every issue in terms of whether it helps the United States compete in the world economy.

"Electronics is the crude oil of the information age," said Mike Maibach, a lobbyist for Intel Corp., the U.S. company that used to make computer parts for the Patriot. "Mr. Bush is not going to be able to fight another gulf war unless he and this country face up to the fact that we need commercial goals, and certain technologies are critical."

Indeed, some industry representatives would like the federal government to do for competitiveness what the Sierra Club did for environmental issues in the 1970s: make it part of every policy debate. Some go so far as to say Congress should require a "competitiveness impact statement" on all new legislation.

"The single most important thing Congress needs to do when it is making law is put on a pair of competitiveness glasses and think about how it will affect the long-term economic health of the country," said Kent Hughes, president of the Council on Competitiveness, a Washington-based think tank.

Last September, the White House issued a white paper on technology policy and followed it with fiscal 1992 spending proposals that would take the first steps toward allowing the government to chart the course of technology development.

To build Patriot missiles, defense contractors must rely on computer parts made in Japan.

The administration proposed spending $150 million to develop a way to link the nation's largest computers, which is supposed to help the United States maintain its international leadership in high-speed computer technology. It also recommended a $36 million budget for the Advanced Technology Program — three times the level President Bush requested last year for the Commerce Department program that invests in embryonic high-technology projects.

"We've been getting soundings from both Democrats and Republicans that the white paper is a starting point for talking about the competitiveness issue," said Fred Nichols, who represents the recently formed National Coalition for Advanced Manufacturing.

The growing cottage industry of lobbyists carrying the competitiveness banner has amazed even those who have been familiar with the issue in Congress. The lobby includes think tanks and other public-education organizations, including the Council on Competitiveness and such venerable business lobbies as the Electronic Industries Association, the National Association of Manufacturers and the Aerospace Industries Association. Also on board are a new spate of manufacturing and computer consortia.

NOWHERE IS THE competitiveness question likely to draw more heat than over the funding for programs that have the potential for turning technological advances into moneymaking commercial ventures.

"We need to turn this juggernaut of our science programs into useful, marketable products," said Rep. Don Ritter (R-Pa.).

But such a transformation would mean taking money from politically entrenched programs, including NASA and the superconducting super collider, the Energy Department's project to build the world's largest atom-smasher. It would also mean modifying somewhat the spending priorities at the Defense Advanced Research Projects Agency (DARPA), the Pentagon agency that helps innovative defense technology projects get off the ground.

In the name of creating superior technology for weapons and surveillance, DARPA spends more than $300 million each year on "dual-use" technologies, those that have both civilian and defense applications.

DARPA was the agency that first funded the early generation of supercomputers in the 1950s and 1960s, putting the United States in the lead of the worldwide computer industry. It was the agency that supplied the money for the pioneering research into stealth technology, which has allowed the military to build radar-evading planes.

Some industry and congressional representatives say there should be more DARPA-like activity targeting the civilian sector. Commerce's ATP, created by the 1988 Omnibus Trade Act, will provide funds this year to "precompetitive technologies."

"If the ATP program had been around in the 1950s, it would have funded research on technology like the integrated circuit," said George Uriano, the program's director. Integrated circuits are now a fixture in thousands of products, "from watches to computers to thermostats to fax machines," he said.

EVEN DARPA IS being geared toward more dual-use projects, including research in semiconductor technology, high-definition display technology (whose civilian counterpart is high-definition television or HDTV), and gallium arsenide and X-ray lithography, both of which promise to allow computer chips to function even more rapidly and store more information.

"Dual-use technologies provide the underpinnings for both our national security and competitiveness in the long run," said Jeff Bingaman, (D-N.M.), of the Senate Armed Services Committee.

Alissa J. Rubin is a reporter for Congressional Quarterly. CA 3-8-91 A8

E-VTO 1991 Mid June Memo

Research indicates that leadership consists of three primary activities: (1) analyzing and evaluating, (2) creating visions of the future, and (3) transforming visions into multi-year action plans.

One of the greatest challenges we face is to be able to predict, with some degree of accuracy, the demographic, social, economic, technological, governmental planning - political, and values changes that will occur in the 1990s and shape the 21st Century. Attached is a chart which displays the "Waning of 'Industrial Society' - Rise of 'Technical, Information Society'" through technologies in the 1950s, 1960s, and 1970s. The second attachment is an attempt to envision change in the 1980s, followed by three diagrams intended to help visual "Learning Communities in an Information Age." The next attachment displays major demographic, social, economic, technological, governmental planning - political, and values changes in the 1990s.

These attachments have proven useful in PHE seminars and strategic planning workshops to help create visions of the future (ED 319 882, ED 327 117). Lt Col. Mike Cupples developed a vision of the future of variables that will influence Ft. Rucker, Alabama, the aviation training center for the U.S. Army, in E-VTO 1989; his MARP is on creating a HRD plan based on advances on communication and information technologies. Beulah Timmons developed a vision for an advanced biotechnical era in E-VTO 1989. Norma McKinnon developed a detailed three page list of variables that will impact Nothern Maine, Technical College in the 1990s for her second paper in Human Resources Development in winter 1991; her emphasis in on nursing educatoin. Other attachments are sheets intended to help develop a vision of the future.

Develop a vision of the 1990s that fits your work context. Specify demographic, social, economic, technological, governmental planning - political, and values changes that will impact on your work context. A basic form is on the reverse side of this memo. You may want to concentrate primarily on workforce or workplace issues. Send me a copy by July 10 and bring 40 copies to the SI.

E-VTO requirments and due dates:

June 29	Unit VI
July 6	Elective
July 10	Analysis of significant concepts and implications: 1 copy to me, bring 40 to Summer Institute (SI).
July 10	Five pages of relevant VTO materials: 1 set to me, bring 10 to SI for small group.
July 10	Visions of the future 1 copy to me, bring 40 to SI.

1990s: Transition To An Advanced Technical Era

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

Demographic

Social

Economic

Technological

Miniaturization of Electronics
Superconductors & Advanced semiconductors
Communication & Information Technologies, Fax, Computers
Fiber Optics
Optics
High-definition TV
Biotechnology
Chromosome Mapping
Pharmaceuticals
Body parts - mechanical & animal
Aeronautics
Energy - Solar, Wind, Ocean/Sea

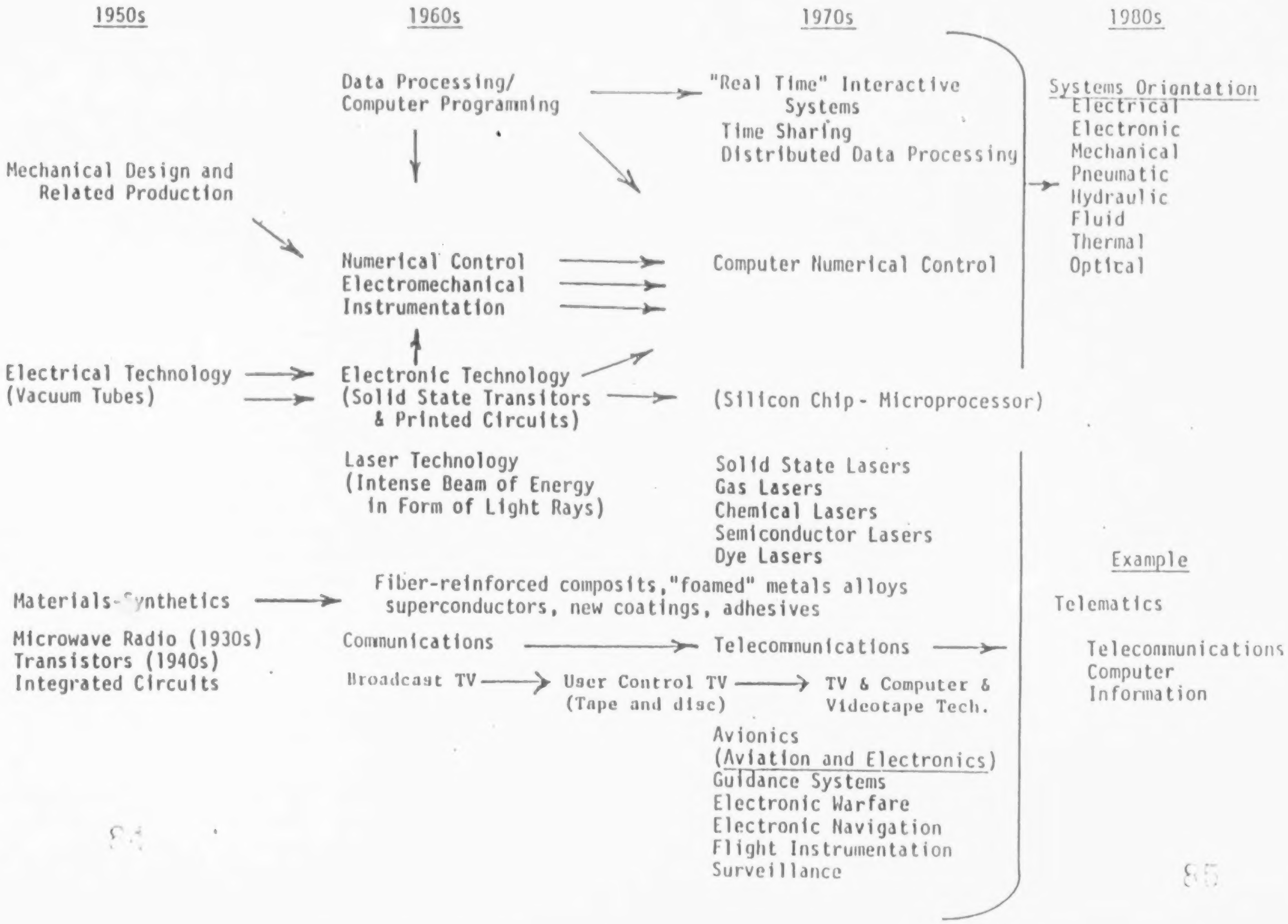
Governmental Planning/Political

Critical Points of Intervention
1 2 3 4 5 6
1990-1991 1992-1993-1994-1995 1996-1997-1998-1999 2000
(1, 3, and 5 = Platform) (2, 4, and 6 = First 100 Days)

Values

SIGNIFICANT CONCEPTS	IMPLICATIONS
THE CHANGING NATURE OF SOCIETY: The nature of society is changing quickly, from agricultural, industrial, technical to informational society. This change of society can be expected in trends of thoughts, and in the political and economic structure of society.	**America's workforce had changed significantly in the past four decades as a result of basic structural changes. This learning and changing a society will be characterized as interactions between people ideas and knowledge, it also influence the strategic of human resources development.
STAGE OF HUMAN DEVELOPMENT: Career opportunities is important to human development, the school-based , industry-based, and community-based career education models is developed to met the need of human development, it is a complete educational concept, and focused on the life span of individuals.	**Educational experience and services provided the people to make more intelligent occupational choices to develop competencies in the occupation of their choice, and to advance in a chosen field. Specialized vocational and technical education is one phrase of this total process.
LINKING HRD TO ORGANIZATION DEVELOPMENT : Organization as a process or function includes two parts; (1) the organization of the work to be accomplished, (2) the organization of the people to accomplish the work. So the organization development is important as well as human development. There are various stages of the organization development, they are now at different stages of evolution tend to elicit different managerial organizational styles.	**The study of human resource development will solve the problem of manpower change. It also depends upon how the operation of education will be. Linking human resource development to school development is an important process to met a manpower need in the year 2000. VTO-education must execute in the formal (school) or informal (training center) organization system.
ORGANIZATION AND ADMINISTRATION OF THE HRD FUNCTION: Well educated and competently trained people can master the new technologies and specialized services. So the performance appraisal systems, and communications and information systems are based on the principles of the industry society, the information society will also have profound impact on the organization and administration of the HRD function.	**HRD in the technical society based on information will follow a step that begins with policies of education. An institution of post secondary education will create to fill a role that society has deemed necessary as it relate to its well being. So the broadcast network as an in-school utility will be the new model of organization and administration in the information area.
LEADERSHIP IN HRD: Leadership and management both are two primary functions of administration. The individual dimension (psychological) and the group or organizational dimension (sociological) of leadership must be considered together. So the basic approaches to leadership have moved through three rather dominant phrases; trait, attitudinal and situational.	**Leadership for the development of vocational, technical, and occupational education must started with the national (states) level, and subsequently to the development of programs at the local level. It is based upon the results of motivational research.

WANING OF "INDUSTRIAL SOCIETY" - RISE OF "TECHNICAL, INFORMATION SOCIETY"



1950s

1960s

1970s

1980s

Data Processing/
Computer Programming → "Real Time" Interactive Systems
Time Sharing
Distributed Data Processing

Mechanical Design and Related Production → Numerical Control

Numerical Control → Computer Numerical Control
Electromechanical →
Instrumentation →

Electrical Technology (Vacuum Tubes) → Electronic Technology (Solid State Transitors & Printed Circuits) → (Silicon Chip - Microprocessor)

Laser Technology
(Intense Beam of Energy in Form of Light Rays)

Solid State Lasers
Gas Lasers
Chemical Lasers
Semiconductor Lasers
Dye Lasers

Materials-Synthetics → Fiber-reinforced composits, "foamed" metals alloys superconductors, new coatings, adhesives

Microwave Radio (1930s)
Transistors (1940s)
Integrated Circuits

Communications → Telecommunications →

Broadcast TV → User Control TV (Tape and disc) → TV & Computer & Videotape Tech.

Avionics
(Aviation and Electronics)
Guidance Systems
Electronic Warfare
Electronic Navigation
Flight Instrumentation
Surveillance

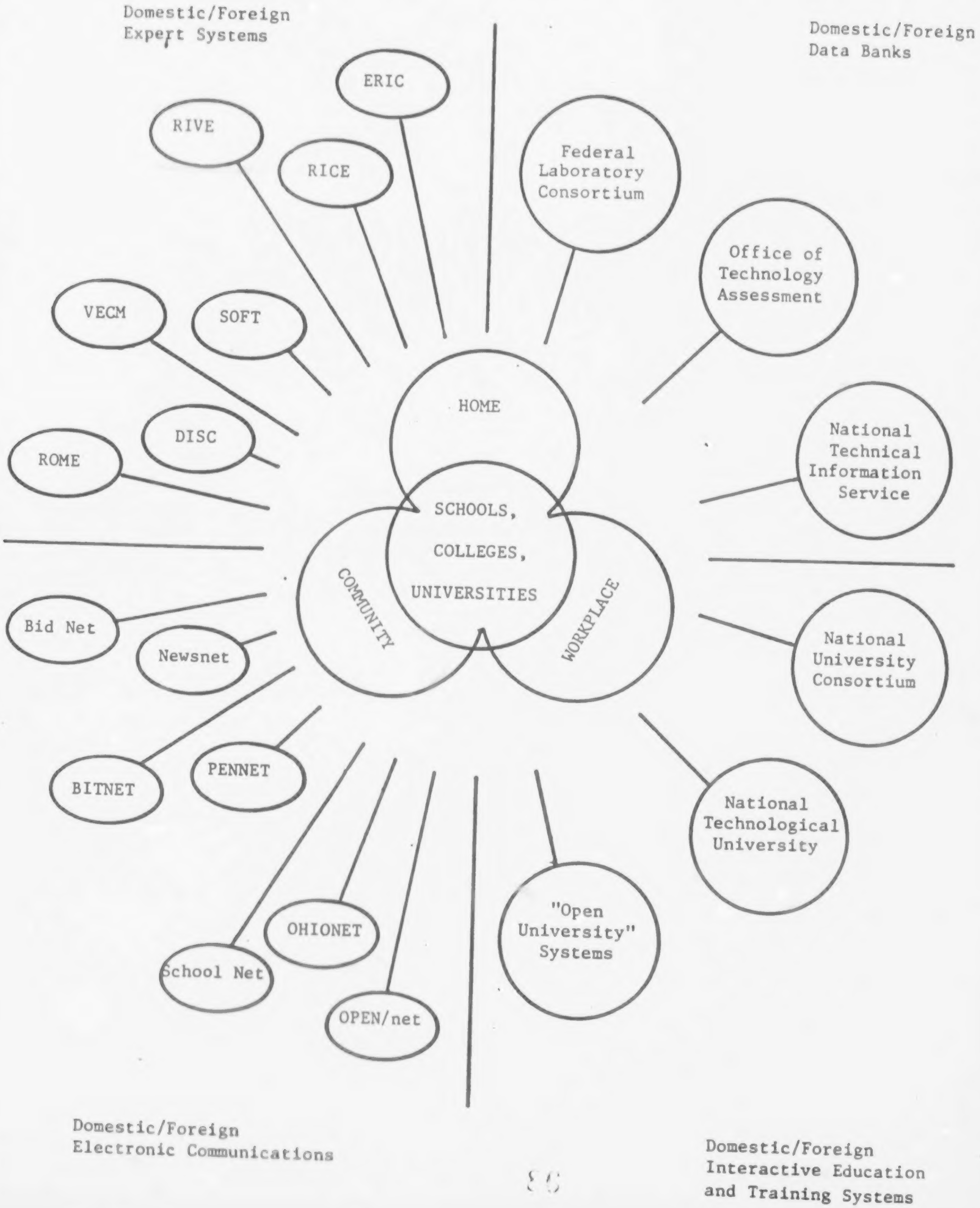
→ Systems Orientation
Electrical
Electronic
Mechanical
Pneumatic
Hydraulic
Fluid
Thermal
Optical

Example

Telematics

Telecommunications
Computer
Information

LEARNING COMMUNITIES IN AN INFORMATION AGE


Domestic/Foreign
Expert Systems
Domestic/Foreign
Data Banks
ERIC
RIVE
RICE
Federal Laboratory Consortium
Office of Technology Assessment
VECM
SOFT
HOME
DISC
ROME
National Technical Information Service
SCHOOLS, COLLEGES, UNIVERSITIES
COMMUNITY
WORKPLACE
Bid Net
Newsnet
National University Consortium
BITNET
PENNET
National Technological University
OHIONET
"Open University" Systems
School Net
OPEN/net
Domestic/Foreign
Electronic Communications
Domestic/Foreign
Interactive Education
and Training Systems

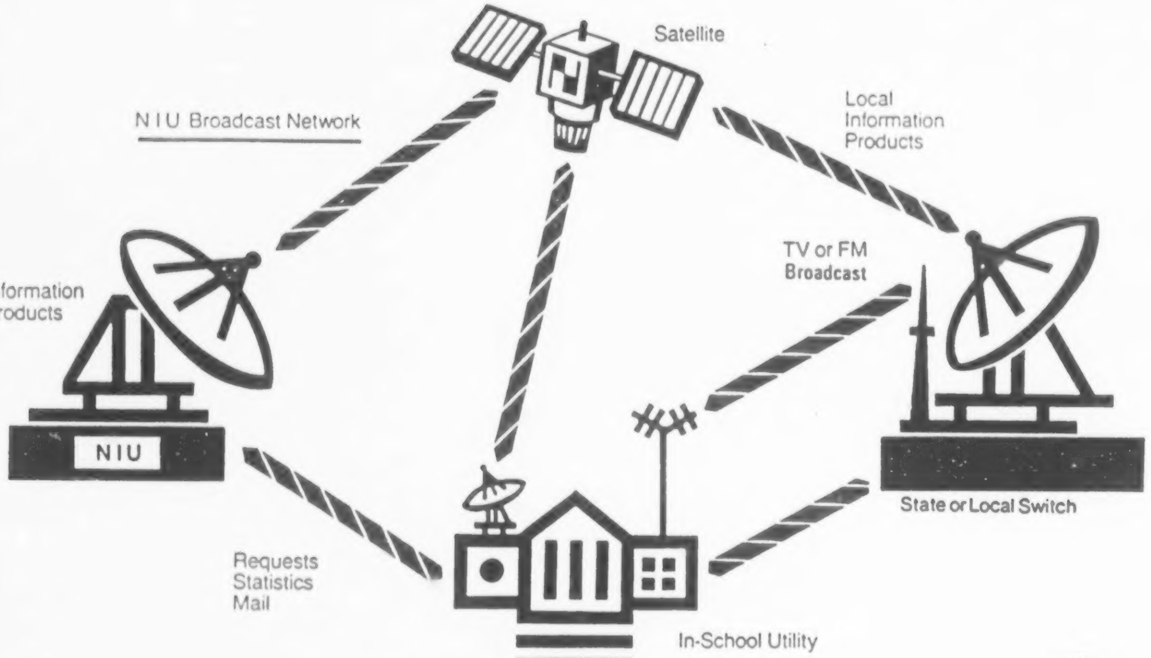


Figure 1

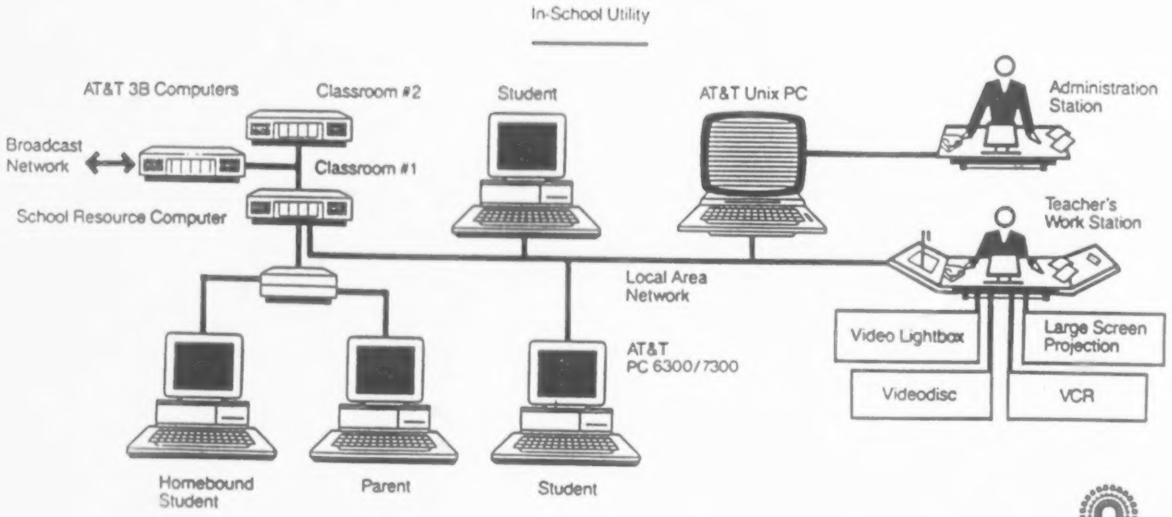


Figure 2

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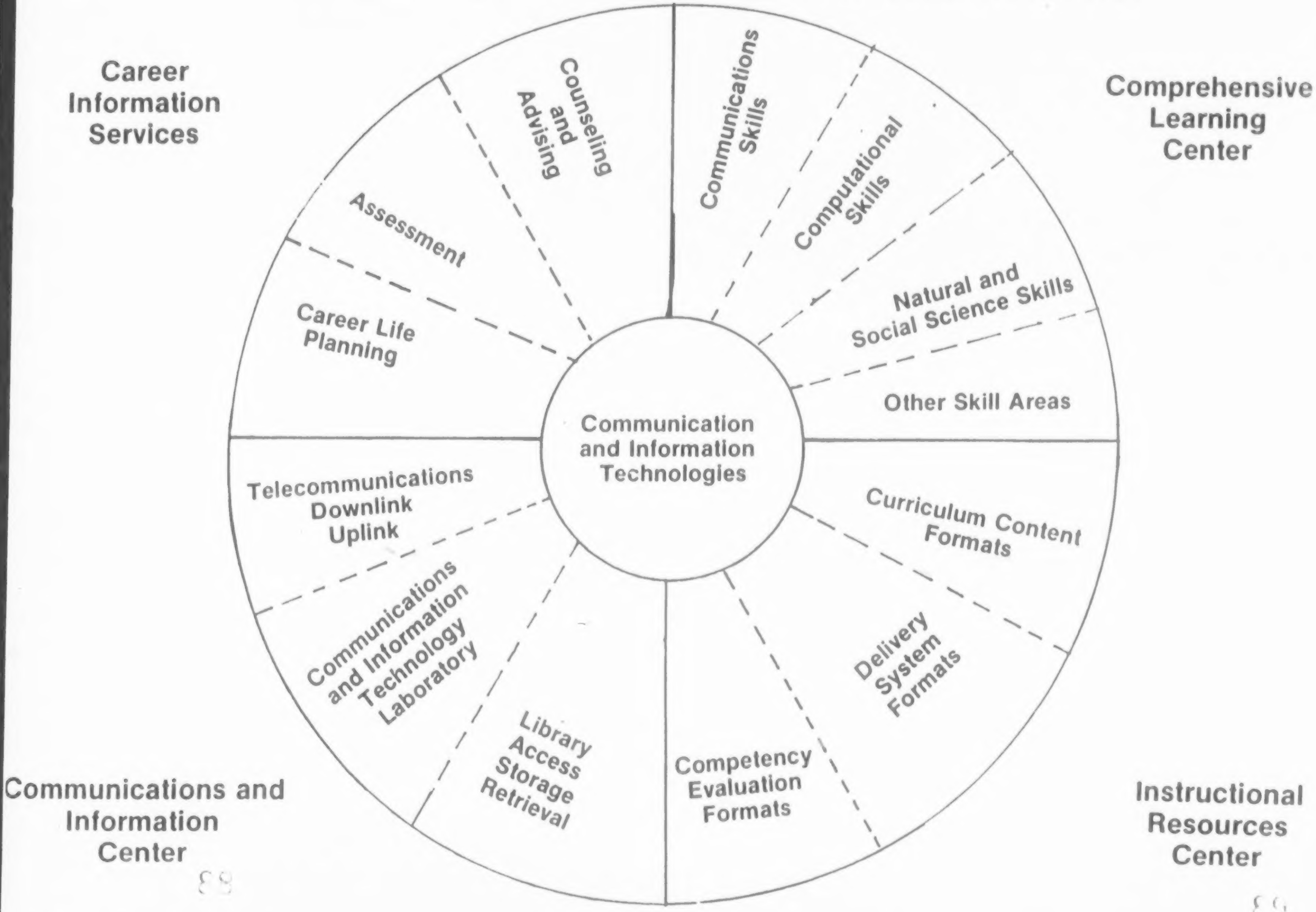
COMPONENTS OF A HUMAN RESOURCES DEVELOPMENT SYSTEM



Career Information Services

Counseling and Advising

Assessment

Career Life Planning

Comprehensive Learning Center

Communications Skills

Computational Skills

Natural and Social Science Skills

Other Skill Areas

Communication and Information Technologies

Communications and Information Center

Telecommunications Downlink Uplink

Communications and Information Technology Laboratory

Library Access Storage Retrieval

Instructional Resources Center

Curriculum Content Formats

Delivery System Formats

Competency Evaluation Formats

1990s: Transition To An Advanced Technical Era

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

Demographic

graying of America
graying of America
graying of America

cultural diversity
cultural diversity
cultural diversity

Social

Decade for Children and Youth

Special groups -
- elderly
- Native Americans
- Afro-Americans
- Hispanics
- Asians

Economic

Europe 1992
Canada-US-Mexico
Limited South American Common Market
Pacific Rim Common Market
Limited USSR & China CM

Central America CM
North & South America CM
Western Asia CM

Emergence of Global Integrated Economy

Increase in number of multinational corporations

LBOs of MNCc

MNCs vs Nations

Technological

Miniaturization of Electronics
Superconductors & Advanced semiconductors
Communication & Information Technologies, Fax, Computers
Fiber Optics, Optics & High-definition TV
Biotechnology, Chromosome Mapping, & Pharmaceuticals
Body parts - mechanical & animal
Aeronautics
Energy - Solar, Wind, Ocean/Sea

Governmental Planning/Political

Critical Points of Intervention
1 2 3 4 5 6
1990-1991 1992-1993-1994-1995 1996-1997-1998-1999 2000
(1, 3, and 5 = Platform) (2, 4, and 6 = First 100 Days)

Use of electronic highways for proactive advocacy
Goal setting and leadership development projects

Values

Traditional
New Values
New Values

VISION OF THE FUTURE

1990 1992 1994 1996 1998 2000

ORGANIZATIONAL STRUCTURE

Broaden job descriptions Civilian contractor (75%)
High tech triggers redesign for skills articulation
Local autonomy Smaller structure and workforce
Better communications vertical and lateral
Work is less drudgery

MANAGEMENT PROCESS

Better understood USAAVNC decision-making
Control separate from reporting Success hard to define
More worker autonomy Part-time management for some employee
Unions and management redefine work
Less paternalistic climate More a creative facilitator
Overlapping job responsibility
Better visioning New rewards for innovative work

HUMAN RESOURCES

Smaller pool of workers Less "organization man"
Better trained worker force More job skipping
More diversified work force Less loyal and obedient
Individual is human capital More challenging of authority
More sense of involvement

ECONOMIC

Fewer dollars Competition from contractors
More dollars
50% of operational budget is training
75% of operational budget is training
Acknowledgement that information is a economic resource

TECHNOLOGY

More networking of computers More robotics
Notebook computers Better simulation of reality
More flexible educational technology
Hardware costs more acceptable Decision making intelligence
Artificial intelligence
More telecommunications Computers support creativity

INFORMATION

More data bases
Easier access to info
Knowledge of information doubles

Demographic

Army is access to high tech Minorities outnumber majority
High functional illiteracy Shifts in population areas
Changing values Diversified workforce

Social Political Cultural

More small industries Working at home Concept of work changes
English as a second language Info poor individuals
More distrust of the government Haves and have nots
Number of "traditional" jobs shrink

B. Timmons

1990s: Transition To An "Advanced" Biotechnical Era

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

Demographic-

- Increased populations in the South and West U.S.
  - Town and country differences in available services
    Greater percentages of WORLD UNREST

Social-

- Decade for youth and minorities
- Special groups
  - Continuation of gendered emphasis in routine jobs
    - women
      - women
        - WOMEN
- Increasing numbers of non-whites in work force
  - racial percentage increases
    - Afro-Americans
      - Hispanics
        - Asians
          - DISCRIMINATION

Economic-

- Two-layered health and medical scenario
  - Physician and scientifically oriented Ph.D.'s
  - Supporting (ancillary) workers with lessening of upward mobility
    - CAPITALISM AT ITS WORST

Technological-

- Continuation of biotechnology progress
  - Pharmaceuticals development
    - Home testing methodology and physician-office laboratory testing
      - High automation in large medical centers
        - SMART MACHINE AGE

Government Planning/Political-

- Critical Points of Intervention
  - Abandonment of needs of elderly
    - Emphasis upon protection of the young worker
      - Intermittent planning and provision for health insurance
        - Increasing trend toward federal control of health care industry
          - MASS CONTROL

Values-

- Attitude changes
  - Lessened humanistic environment
    - Changed work meaningfulness
      - Less charitable work ethic, more practicality, more competitiveness
        - BIOTECHNICAL PROGRESS
          people manipulation

chaos

NMTC'S TRANSITION TO AN ADVANCED TECHNICAL ERA

1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

DEMOGRAPHIC

* reduction of young entry-level workers
* majority of students will be nontraditional
* rising median age of student
* increased enrollment of students aged 55 and over
* increased enrollment of handicapped
* majority of workers will be single-parent females aged 25-44
* declining male population
* increase in number of academically under-prepared students
* increased cultural diversity
* increased number of commuters and part-time students
* aging population in primary service area
* need to expand geographic recruitment area to maintain current enrollment

SOCIAL/EDUCATIONAL

* increased satellite and outreach programs and services
* all curricula competency-based
* increased need for career guidance
* increased developmental and remedial studies
* state level voc. curriculum network
* on-campus daycare provided
* elderly services
* increased community services
* curriculum balanced
* women's support group established
* diversity plan implemented
* overcoming sex-bias and stereotyping of entry into nontraditional programs
* reshaping of the educational delivery system to better serve Maine's learners
* realization that NMTC needs to embrace diversity
* new programs directed toward critical industries
* stronger program evaluation
* implementation of staff development initiatives
* increased support to entrepreneurs and owners of small businesses
* articulation agreements between vocational regions & centers with NMTC - collaborative planning of career and occupational education

ECONOMIC

- budget deappropriations
- alumni active in fund raising
- energy conservation measures
- forced retirement
- employee layoffs
- more involvement with ITV
- PR and marketing increased
- financial assistance from business/industry
- increase in grant writing
- increased partnerships with business/industry
- restructuring school calendar
- student lobbying for college funding
- charge for use of facilities
- cuts in employees' fringe benefits
- increase in financial aide
- F.T. faculty teach evening classes without extended contract
- reduction in travel
- eliminate athletic program
- grantwriting increased
- increased campus planning
- cut overtime and stipends
- sell off excess acreage
- administrators teach courses
- planning to combine technical college system with the university of Maine system
- curriculum revolution e.g., ADN program
- more degree programs
- increase ratio of non-general funds to general funds
- new economy

TECHNOLOGICAL

- system based approach to organizational planning
- computer network NOVA NET
- all faculty have workstations connected to AS400
- fiscal management by integrated software package
- all students assigned computers
- clinical instruction for nursing is partially completed using interactive computer programs
- increased organizational development and HRD
- CPR training via computer program
- aggregate buying of software & hardware & other equipment with business and industry

Contd. TECHNOLOGICAL next page

TECHNOLOGICAL (Cont.)

- multi-purpose fax, laser, photocopiers in every office
- optical discs in library
- ITV actually interactive
- challenge courses via computer instruction modules
- increased involvement with educational consortiums
- instructors do computer work at home and transmitted via modum to college
- students acquire credits for home-study
- truely graduating the "broad" technician

GOVERNMENTAL PLANNING/POLITICAL

- increased involvement with politicians at all levels
- increased financial support to needy students
- increased government funded programs
- increased grant writing
- increased accountability
- increased strategic municiple planning involving college at state/local level
- increased political clout by NMTC secondary to the need to train/retrain nontraditional workers
- involvement in government studies
- campus safety
- state government takes the lead in developing core competencies for all vocational disiplines
- increased government involvement in delivery methods and funding issues
- new political conflicts

VALUES

- academics
- educate "whole" student rather than a "worker"
- new family styles
- diversity
- new ways of loving, living, working
- caring, learning growing, campus environment
- personal development
- change
- women in leadership
- alternative delivery methods
- technical education
- professional development
- advanced education

TIMETABLE OF TECHNOLOGICAL BREAKTHROUGHS

	Years Ago
Use of antiseptics in surgery	100
Storage battery	
Dynamite	
Use of petroleum for heating, cooking, lighting	
Telephone	
Steam turbine	
Use of steel in construction	
Internal combustion engine	
Synthetic chemicals	
Electric generator	90
Elevator	
Recording & reproduction of sound	
Electric light	75
Electric motor	
Maching gun	
Steel ships	
Aluminum	
Submarine	
Automobile	
Synthetic drugs	65
Synthetic fibers & plastics	
Radio	
Airplane	60

	Years Ago
Rocket engine	50
Commercial fertilizers	40
Hybrid seed	
Air conditioning	
Xerography	
Electron microscope	35
Radar	
Antibiotics	30
Artificial insemination	
Atomic bomb	
Television	
Ballistic missile	
Electronic computer	
Electronic transistor	
Gas turbines	25
Jet engines	
Stimulated emission of radiation (Maser)	
Nuclear power	
Practical use of space satellites	10
Holography	5
Brain scanner	2

Source: I.W. and J.F. Kincaid, Journal of the Assn. for the Advancement of Invention and Innovation, July/Aug. 1976.

TV origins part of 1920s

Important years in television history.

1923 — First patent for a television camera is approved in the United States.

1928 — The Radio Manufacturers Association Television Committee meets to create a framework for the introduction of TV. Also, the federal government issues permits for experimental television stations.

1939 — President Franklin D. Roosevelt opens the New York World's Fair with the first live public broadcast on television.

1940 — The Federal Communications Commission begins hearings on television standards.

1941 — The FCC suspends awards of operating licenses because of World War II.

1942 — The FCC accepts the National Television System Committee's recommendation that receivers should include a standard 525 lines per frame with a 4:3 picture ratio.

1947 — The FCC begins listening to the RMA's proposals to offer color television. Baseball's World Series is televised.

1948 — CBS owner William Paley entices popular performers from NBC's Radio Network by offering to buy programs as properties from the entertainers who perform them. First Emmy Award is presented.

1949 — RMA announces a proposal for color television that is compatible with the monochrome so the picture won't deteriorate. Cable television is born.

1950 — Television receiver production reaches 5.2 million per year, with 150 U.S. firms making television sets. TV industry makes first profit.

1951 — *I Love Lucy* debuts. President Harry S. Truman's speech at the Japanese Peace Conference in San Francisco is carried live, coast to coast.

1952 — Republican vice presidential nominee Richard Nixon uses national television to "come clean" concerning allegations of accepting political bribes.

1954 — Color television is introduced.

1955 — DuMont Network folds.

1956 — Ampex introduces videotape recording system.

1960 — First battery-operated transistor television is introduced. First presidential political debate airs between John F. Kennedy and Richard Nixon.

1963 — President Kennedy is assassinated. Networks suspend regular programming for four days.

1964 — All-channel receiver bill becomes law, requiring all new TV sets to contain UHF and VHF channels.

1965 — Sales of color television receivers surpass sales of black and white sets.

1967 — Consumer price index begins to list TV set prices in its statistics.

1969 — Viewers receive television transmission of the first man on the moon.

1971 — *All in the Family* is introduced.

1973 — Watergate coverage dominates and begins to change the way network news is presented.

1975 — HBO uses satellite to broadcast to its cable subscribers the Joe Frazier-Muhammed Ali fight from Manilla, Philippines.

1976 — Ted Turner uses satellite to offer his Atlanta-based station to every city with cable television, creating the first "Superstation."

1980 — Only five U.S.-owned companies still manufacture television receivers.

1984 — Black and white pocket televisions are introduced.

1986 — Capital Cities Communications buys ABC. Lawrence Tisch buys CBS. Ninety percent of American homes own color TV. Fox Broadcasting Service is born.

1987 — General Electric buys RCA, which owns NBC.

1988 — Only two U.S.-owned companies still manufacture color television receivers.

THE COMMERCIAL APPEAL, APRIL 2, 1989, p. G-2

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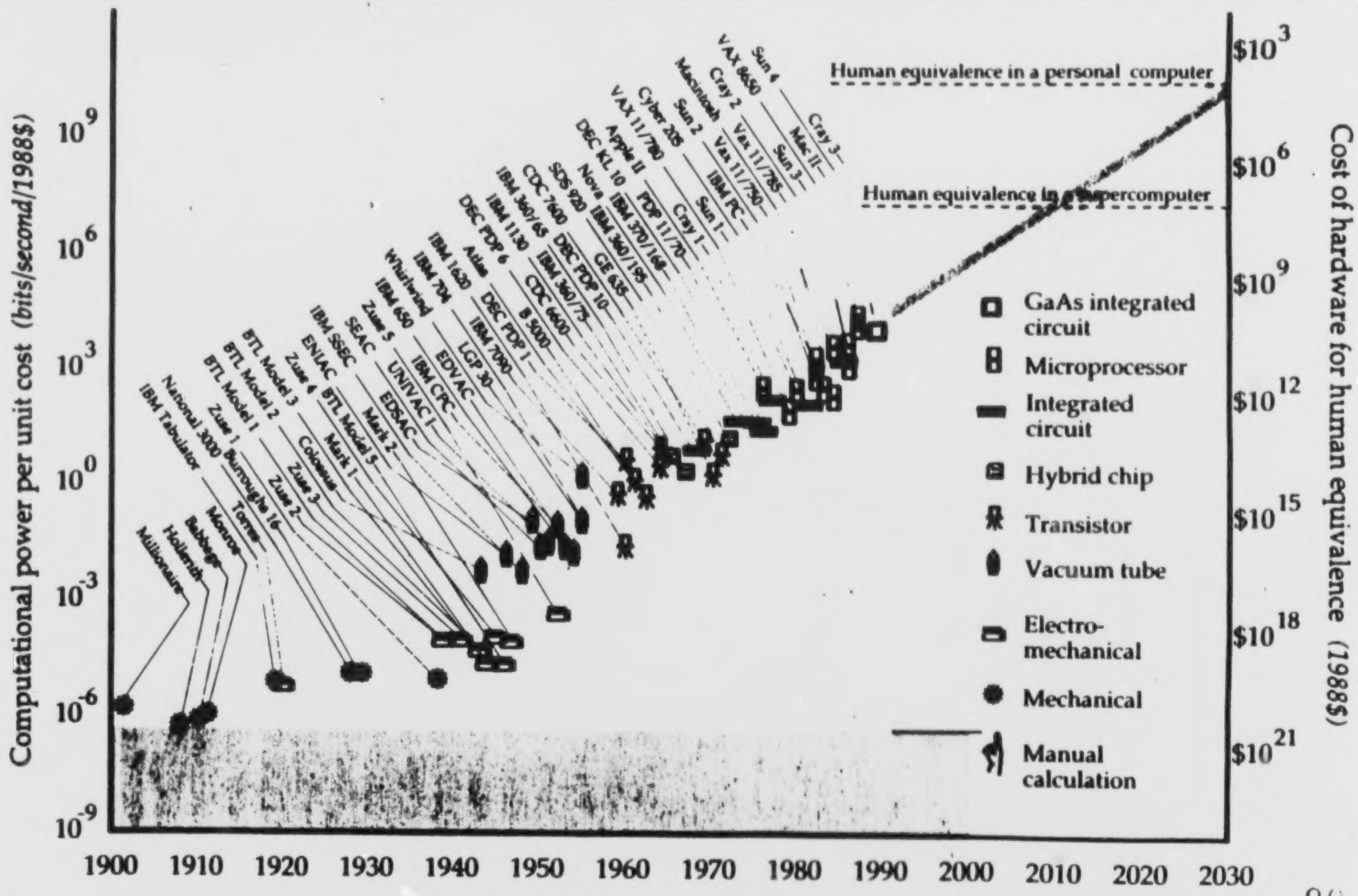
A Century of Computing



WHAT PACKING MORE POWER ON A CHIP WILL BRING

	1980	1985	1987	1990	1995
Circuit Size:	4 microns	2 microns	1 micron	0.5 micron	0.25 micron
Memory Capacity:	64K	256K	1,024K	4,096K	16,384K
Power Range:	Desktop Microcomputer	Minicomputer	Mainframe Computer	Supercomputer	Ultracomputer
Applications:	Digital Watches, Video Games, Personal Computers	Lap Computers, Engineering Work Stations, Programmable Appliances	Pocket Computers, Electronic Map-Navigators, High-Resolution TVs	Robots That Can See, Freeze-Frame TVs, Computers That Recognize and Use Natural Languages	Star Wars Systems, Personal Robots, Computers With Human-Like Logic

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John W. Wilson, "Superchips: The New Frontier," Business Week, June 10, 1985, Number 2898, pp. 82-85.

Historical Development of CAE

	Hardware	Software
1950	Commercial Mainframe	NC Programming Group Technology
1955	Specialized Line Printers	Wiring Lists Logic Diagrams
1960	Interactive Graphics	USAF Project Sketchpad
1965	Timeshare Systems Service Bureaus Commercial Interactive Integrated Circuit Minicomputer Graphic Displays	Database Technology Custom Fortran and Algol Engineering Programs PCB Layout
1975	Turnkey CAD Systems Microcomputer Raster Displays Intelligent Terminals	IC Mask Design, Simulation and Test Relational Databases Specialized Commercial Engineering Applications Packages Workstation Networks
1980	Commercial Array Processors	Sculptured Surfaces Solid Models Kinematic Programs Micro-based CAE Systems Flexible Engineering Systems
1985	Erasable Opitcal Disk Memory	Engineering Manufacturing Integration Expert Systems Voice Data Entry
1990	Commercial Flat Panel Displays	Software Standards
2000	Holographic Displays	Flexible Factory

Source: Creative Strategies International

TELEMATICS DEVICES AND SYSTEMS

Telematic Devices Widely Available Before 1960

- Telegraph
- Telephone
- Microwave transmission
- Radio (AM/FM)
- Television (B/W
- Facsimile
- Phonograph
- Tape recording
- Xerography
- Cable (one-way)
- Transponders
- Typewriter
- Movies
- Still Photography (B/W, color)
- Polaroid
- Microfilm
- Robots - first generation
- Mainframe computers

Telematic Devices Widely Available by the 1970s

- Touchtone pad (push button keyboard)
- Call forwarding
- C.B. radio
- Picturephone
- Portapack video recorder
- Color television
- Portable television
- Frame grabber
- Slow scan
- Private microwave transmission
- Audio cassette
- Low cost xerography
- Two-way cable television
- Electric typewriter
- Geophysical Satellites
- Optical scanner
- Microfiche
- Robots - second generation
- Hand Calculator
- Minicomputer
- Central processing unit memory

Telematic Devices Now & Emerging in the 1980s

- Microprocessor
- 800 numbers
- Voice answer back
- Voice activation
- Low cost video recorders
- Video discs
- Large Screen television
- Laser
- Fiber optics
- Video cassettes
- Electronic scratch pad
- Direct satellite broadcasting
- Word processor
- Graphic & color display
- Speech compressor
- Packet switching
- Robots - third generation
- Microcomputers
- Large scale integrated circuits
- New memory systems: solid state laser, bubble, backend processes
- Morpheme generator

Some Significant Systems & Software

- Micro home information system
- Computer utilities - Illiac IV, Arpanet, Plato
- Communication satellites - Comsat, Intelsat, ATS-6
- Other space Satellites - ERTS, weather, agriculture
- CAD (computer assisted design)
- CAM (computer assisted manufacturing)
- PBX self contained telephone exchanges
- Simulation-modeling
- Aids to the handicapped
- Electronic switching systems (ESS)
- Mobile cellular system
- Information utilities - The Source, Lockheed, Prestel
- Teletext
- Videotex
- Pattern recognition - voice, signature
- Encryption

EASY ACCESS TO THE FLC THROUGH REGIONAL CONTACTS

To take advantage of the FLC network and access Federal Laboratory technology, please contact the FLC Regional Coordinator responsible for your area. The Regional Coordinator working in concert with the FLC Clearinghouse will be able to assist you in locating a specific laboratory to help you answer your question or solve your problem.

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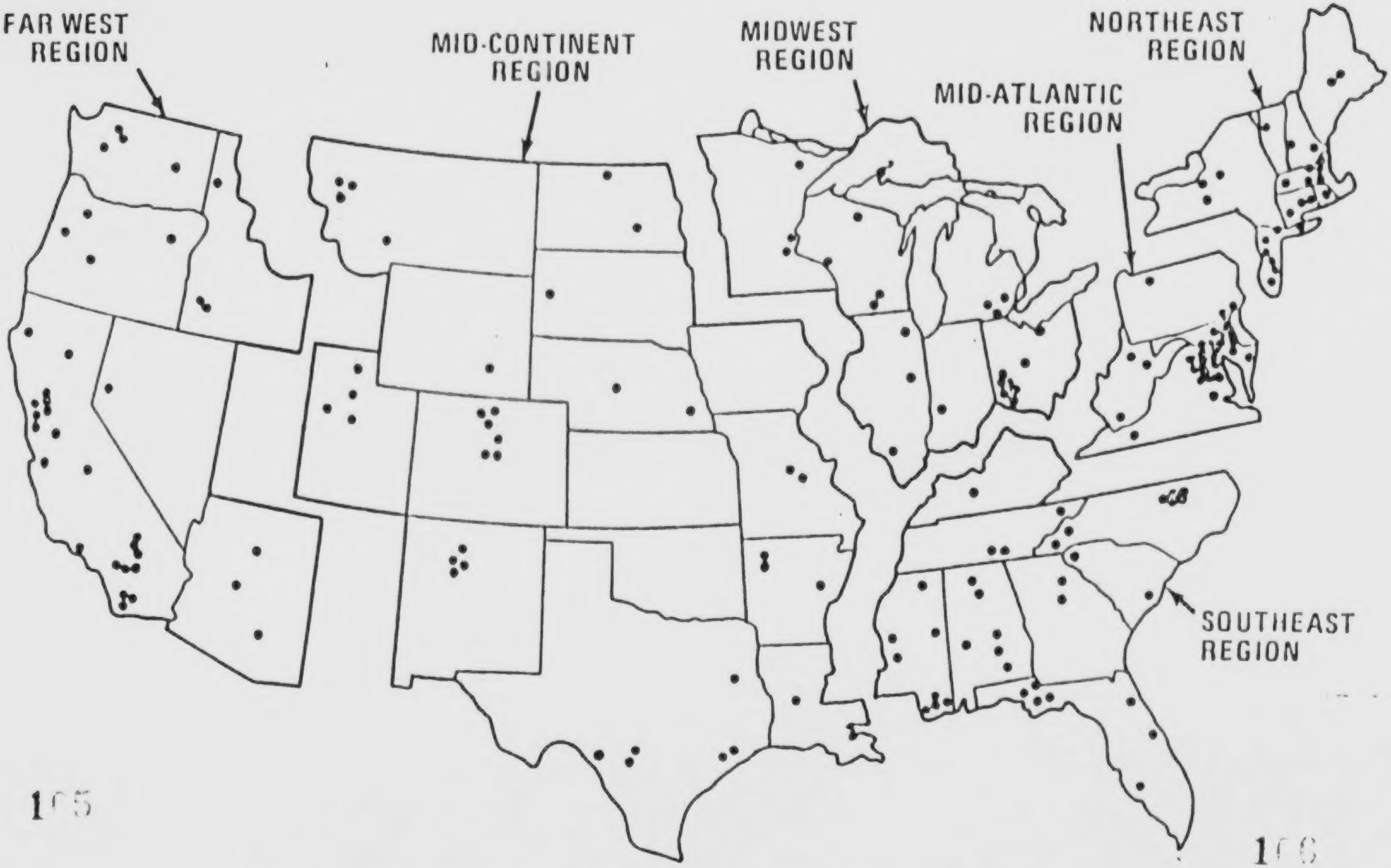
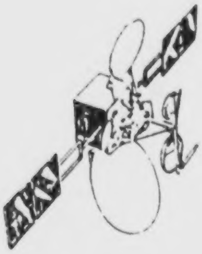
FEDERAL LABORATORY CONSORTIUM



ADVANCED COMMUNICATIONS TECHNOLOGY SATELLITE (ACTS) PROGRAM



Memphis, TN Regional Meeting
by Dean A. Olmstead

March 19, 1991

ACTS

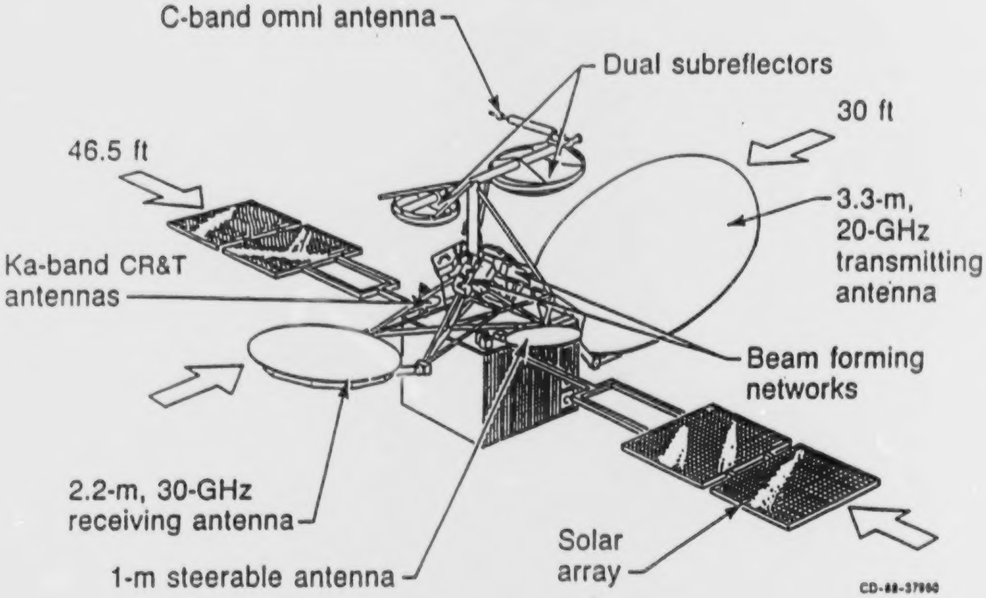
NASA

WHAT IS ACTS?

- Advanced Communications Technology Satellite (ACTS)
- An Experimental Satellite Sponsored by NASA to Pave the Way for Next-Generation Communications Satellites
- Incorporate Advanced Concepts
  - Electronically Hopping Spot-Beam Antennas
  - Onboard Processing and Switching
  - Ka-Band Transmission Equipment
  - Dynamic Rain Fade Compensation
- Target Launch Date: November 1992
- Mission Life: 2 - 4 years

NASA
C-89-00133

Spacecraft Configuration

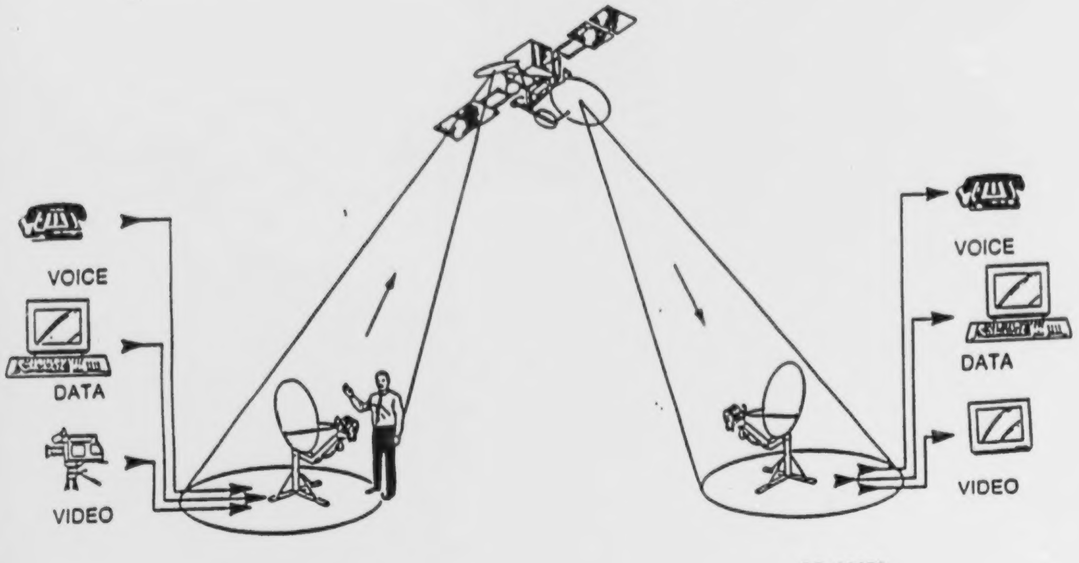


CD-88-37960

ACTS

NASA

T1 (1.544 MBPS) VSAT NETWORK



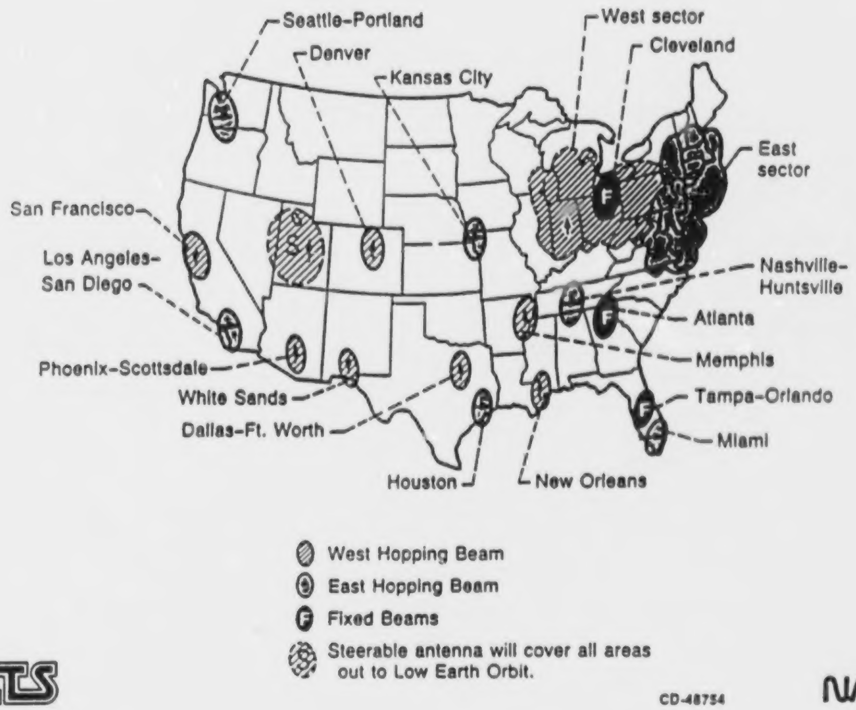
CD-44470

ACTS

NASA

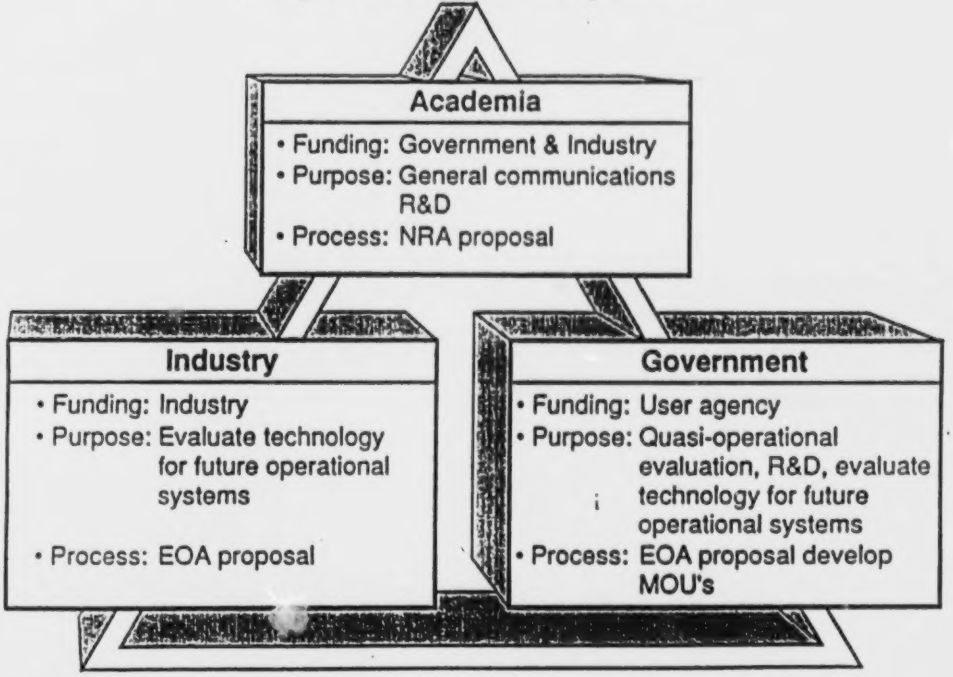
NASA
C-90-08329

ACTS Multibeam Antenna Coverage



CD-48754

Experiment Development



Academia

- Funding: Government & Industry
- Purpose: General communications R&D
- Process: NRA proposal

Industry

- Funding: Industry
- Purpose: Evaluate technology for future operational systems
- Process: EOA proposal

Government

- Funding: User agency
- Purpose: Quasi-operational evaluation, R&D, evaluate technology for future operational systems
- Process: EOA proposal develop MOU's

CD-54125

ALTERNATIVE EDUCATION

1. Contemporary Traditional Education (CTE) Models
    a. Within a CTE Classroom
    b. Within a CTE School
    c. Within a Single Subject - Math, Science, Humanities
    d. Between Subjects - Math and Science, English, and Social Sciences
    e. Between Tracks - Academic and Vocational
    f. Between Schools Within a District - Level, Magnet Schools
    g. Between Districts - "Choice"
    h. Within a State - No. Carolina School of Arts
    i. Special Focus - "At-Risk", Drop Out Prevention, Disciplines, Articulated, Differentiated/Developmental Curriculum, Learning Styles Pregnant Females, Substance Abusers, Cultural Diversity, Substance Abuse, Personal Abuse
    j. Between Layers - Middle College High School

2. Partial Technological Deschooling (PTD) Models
    a. Distant Learning Systems
    b. Apple Classrooms of Tomorrow - Elementary Level
    c. IBM's School of the Future - Secondary Level
    d. The Education Utility

3. Collaborative Lifelong Learning (CLL) Models
    a. Cooperative Education
    b. Clinical Affiliations
    c. Compacts - Academic Credit for Public Service
    d. Partnerships

4. Problem Based Learning (PBL) Models

5. Other Education and Training Provider (ETP) Models
    a. Nontraditional Private Providers
    b. Corporate Sponsored Providers
    c. Home Based Instruction, Correspondence

6. Role of Support Units
    a. Library and Instructional Materials
    b. Instructional Development and Media
    c. Student Assessment, Counseling, Diagnostic Services
    d. Administration
    e. Boards-Advisory, Committees, Directors, Foundations,Trustees

RETHINKING, RESTRUCTURING, REVITALIZING

1991-92 1992-93 1993-94 1994-95

CASEY FDN

RJR NABISCO

AMERICA 2000

OERI

CATHOLIC SCHOOLS

FOR 21st CENTURY

EDISON PROJECT

BLUEPRINT 2000

TOTAL QUALITY COMMITMENT

ENDS

VALUES
- VALUES CLARIFICATION
- SHARED VALUES
- INVOLVING ALL PEOPLE

QUALITY OF LIFE
- DIMENSIONS
- STANDARDS
- DIRECTIONS

MEANS

HUMAN RESOURCES DEV SYSTEMS

1. STRUCTURAL DIMENSION

2. HUMAN DIMENSION

3. PROCESS (WORK) DIMENSION

SMART HOMES

WIRED COMMUNITIES

FAST SYSTEMS

GLOBAL NETWORKS

FAST FORWARD LEARNERS

FULL SERVICE

CARING &

LEARNING

COMMUNITY

ERAS & EDUCATION

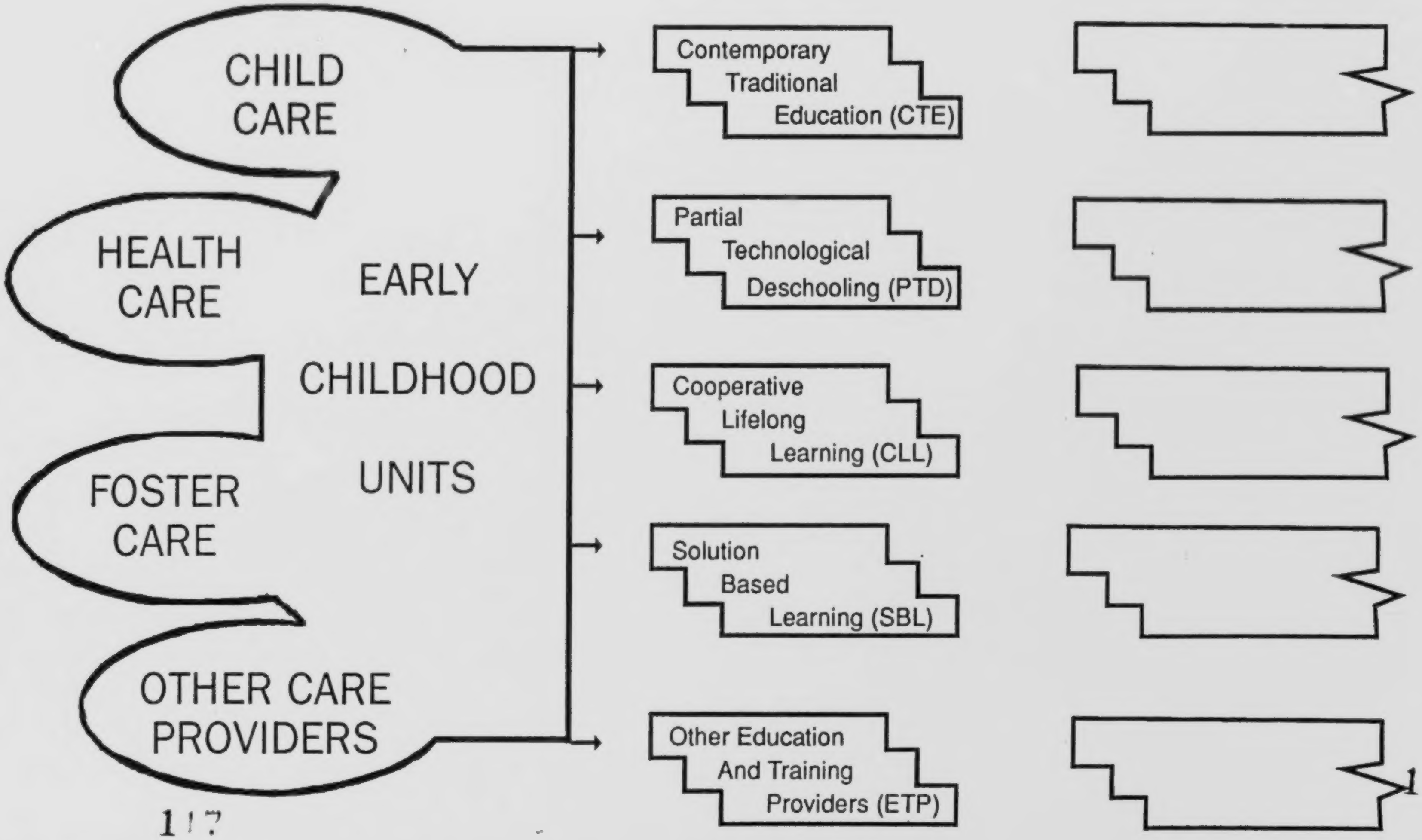
AGRICULTURAL	ACADEMIC APPRENTICESHIP	
INDUSTRIAL	ACADEMIC VOCATIONAL GENERAL	
TECHNICAL	CTE PTD CLL	PBL ETP ?

INFO ERA LEARNING COMMUNITIES OF THE FUTURE

BEGINNING
CARING & LEARNING
ENVIRONMENTS

TRANSITIONAL YEARS
LEARNING SERVICES
ENVIRONMENTS

ADVANCED LEARNING
RESEARCH & SERVICE
ENVIRONMENTS



CHILD CARE

HEALTH CARE

FOSTER CARE

OTHER CARE PROVIDERS

EARLY CHILDHOOD UNITS

Contemporary Traditional Education (CTE)

Partial Technological Deschooling (PTD)

Cooperative Lifelong Learning (CLL)

Solution Based Learning (SBL)

Other Education And Training Providers (ETP)

CHANGE - AGENTRY

LEADERSHIP

SOCIETAL FACTORS

RESEARCH, DEV, & EVAL

HUMAN RESOURCES DEV

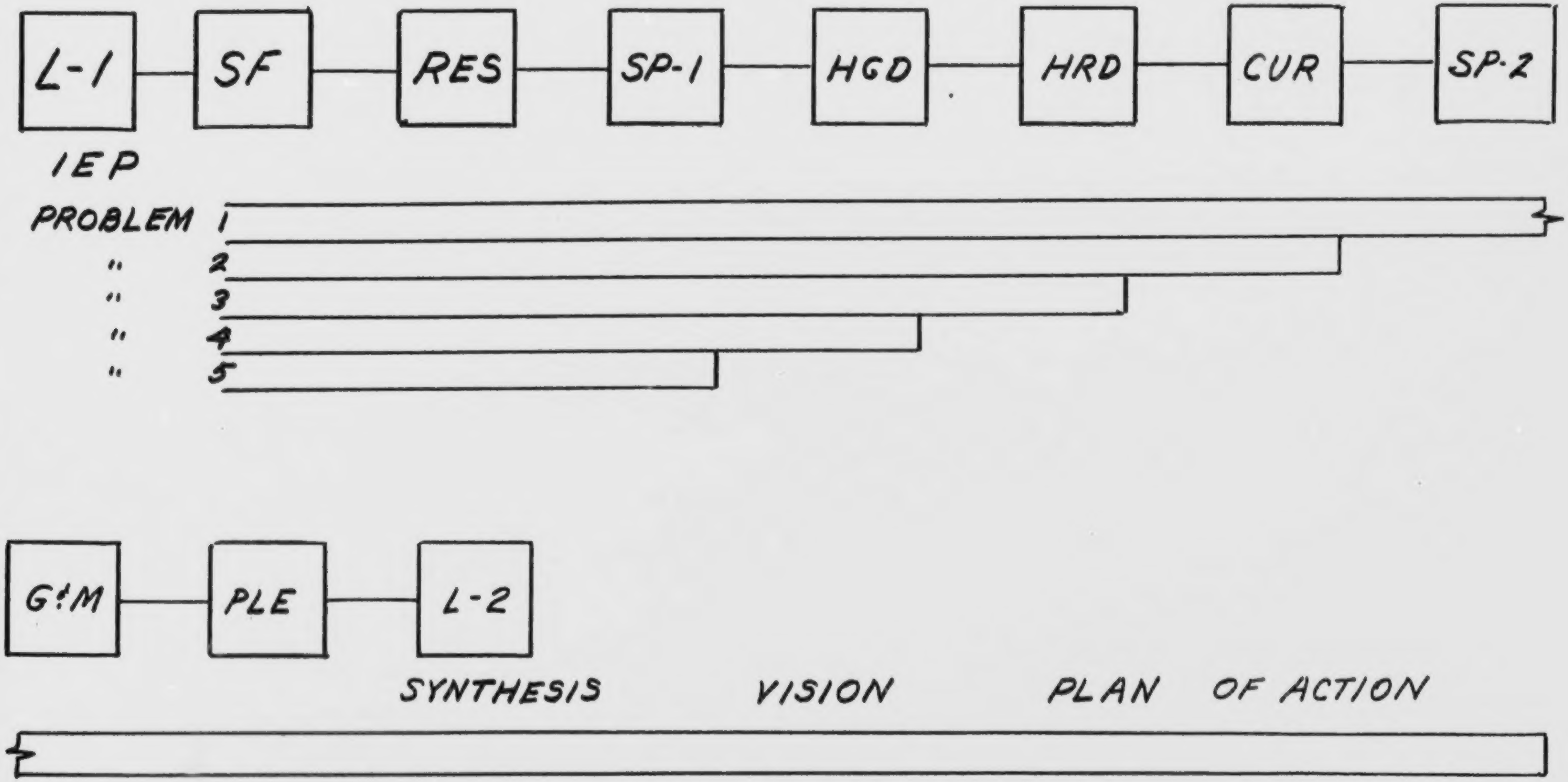
CURRICULUM - LEARNING

GOVERNANCE & MG:
STRUCTURE, HUMANS, WORK

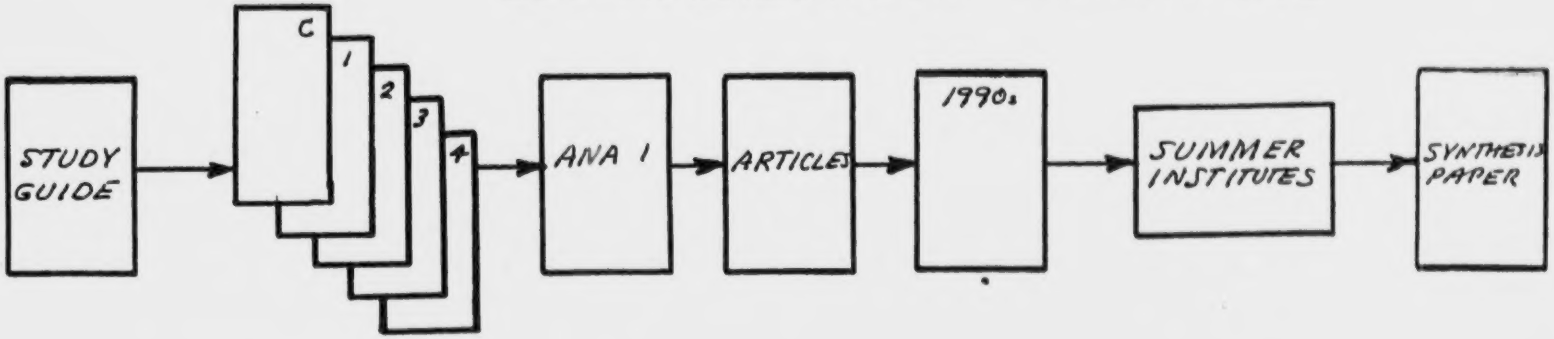
POLITICS, LAW, & ECONOMICS

PAST, PRESENT, & FUTURE:
HISTORY & EVOLUTION

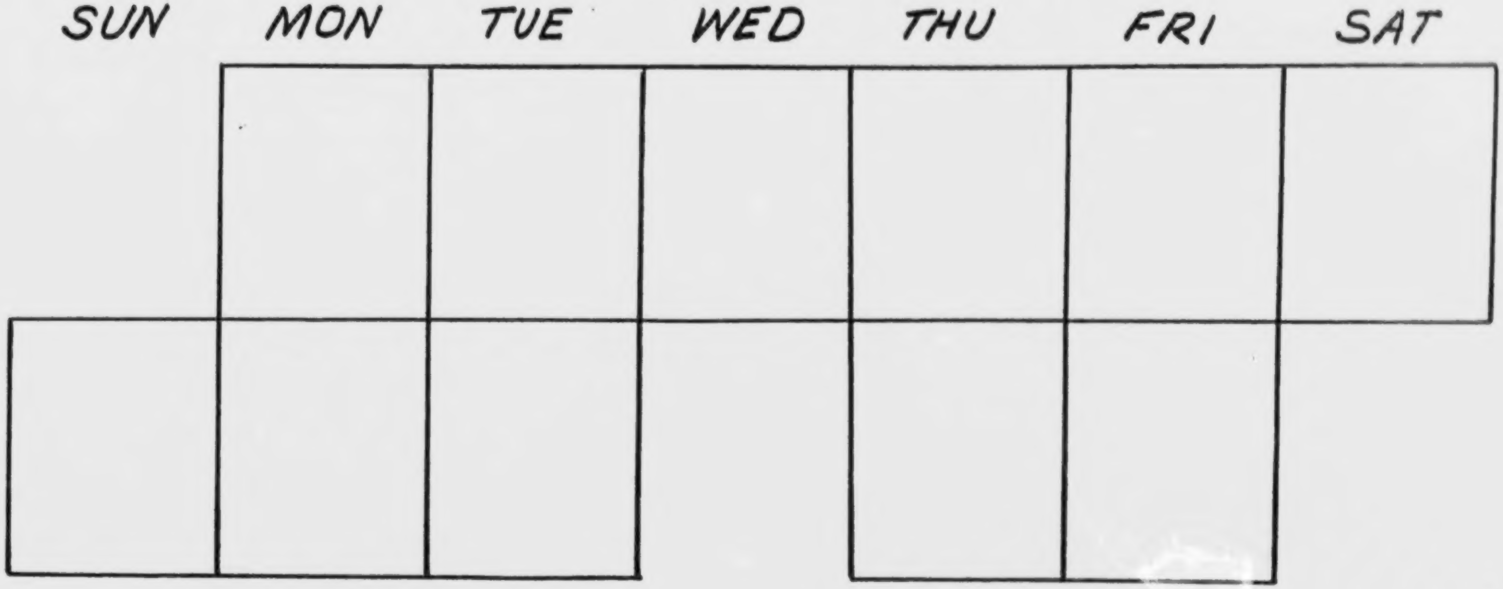
SOLUTION BASED LEARNING
DELIVERED THROUGH ELECTRONIC HIGHWAYS



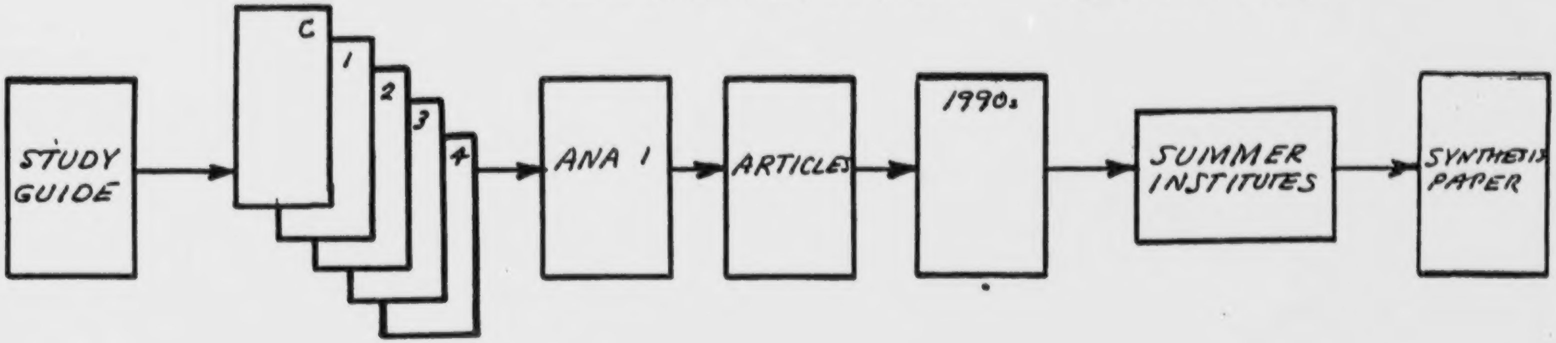
SPECIALIZATION SEMINARS



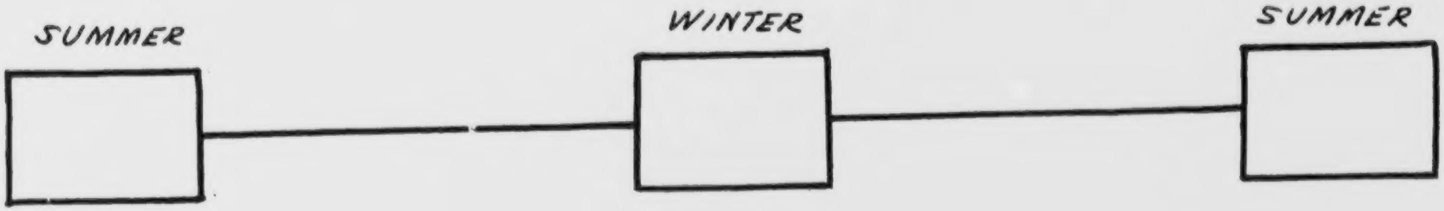
SUMMER INSTITUTE



SPECIALIZATION SEMINARS



CORE SEMINARS



THE TIMELINE FOR PLACING PHE ONLINE

1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

DESIGN PHASE CURRICULAR MODIFICATION EVALUATION PHASE

MCCC
OTHERS

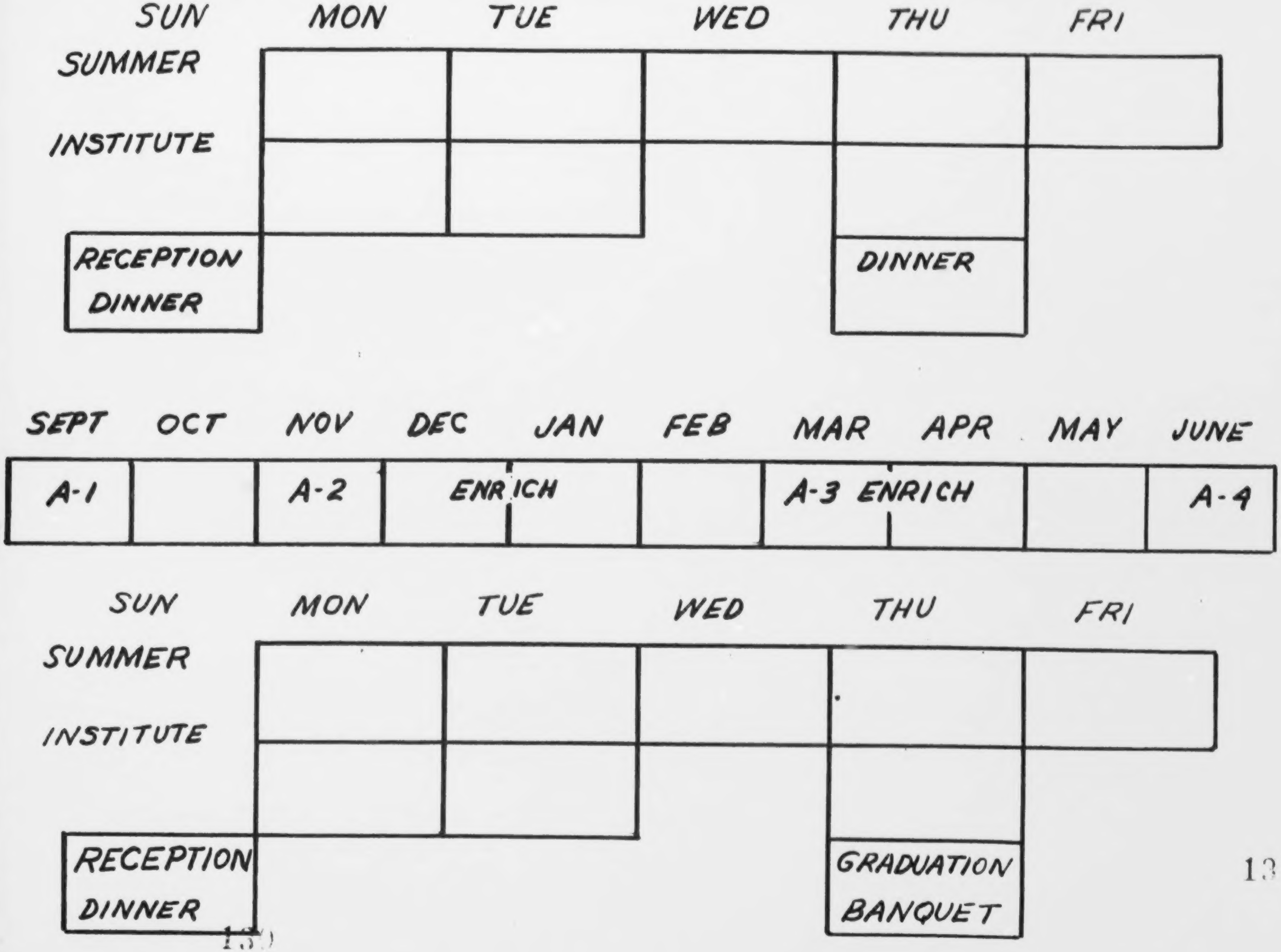
CURR
HRD
G&M
VTO I II
AL I II
HE I II
LDR
SF
RES
HGD
PRACTICA
MARPs

|← FIRST FULL CYCLE →|

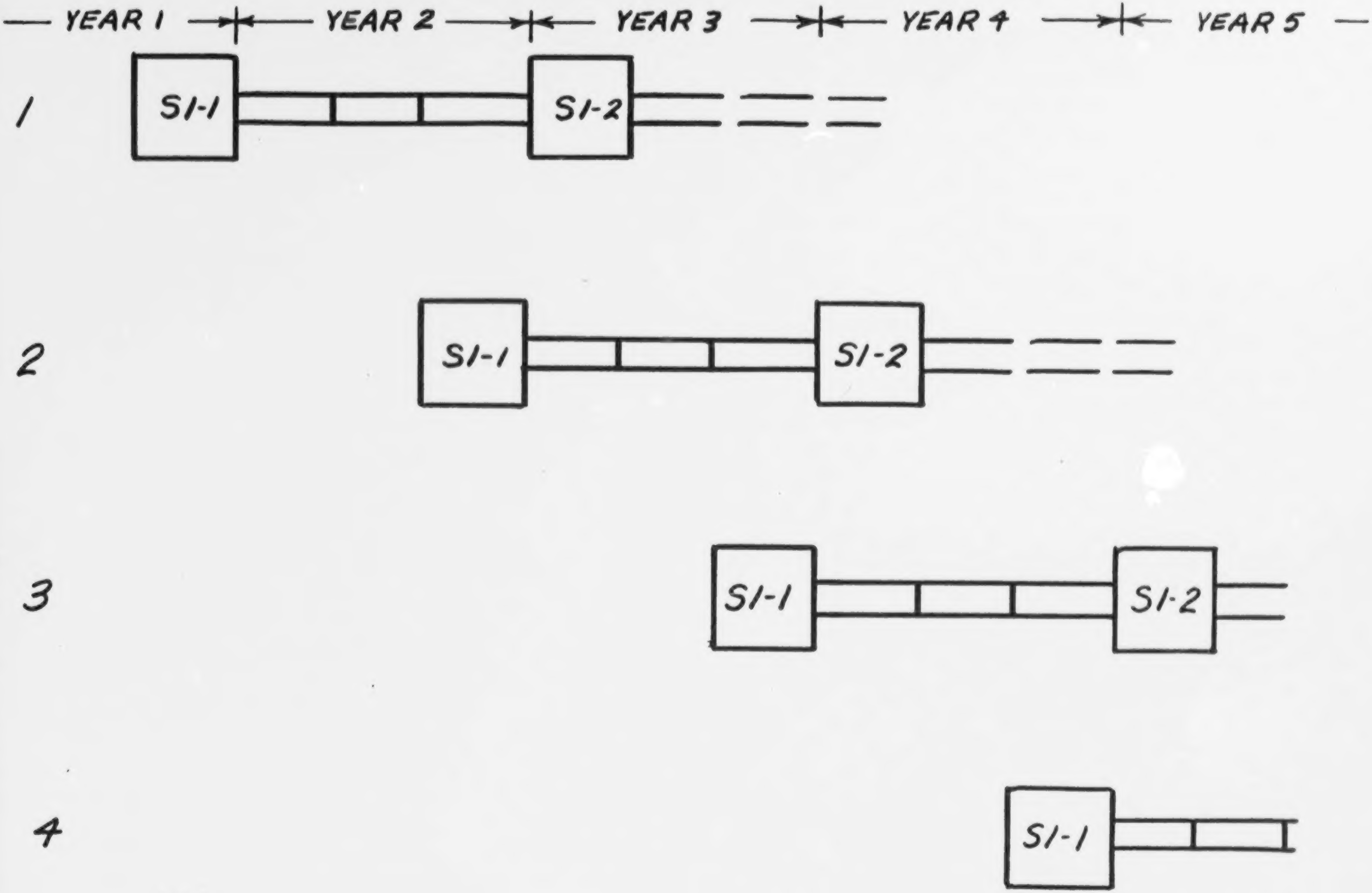
Synergism: OD + HRD

Pre Program Audit	Year 1	Year 2	Year 3	Year 4	Year 5	Post Program Audit
Organizational Development						
Mission Primary Program Secondary Program Climate/ Culture Institutional Effectiveness						
Human Resources Development						
Cognitive Domain Affective Domain Leadership Skills						
Hoped for Outcomes	⟷					Actual Outcomes

INTERDISCIPLINARY POSTGRADUATE DIPLOMATE (IPD)



MULTI-YEAR PLAN FOR IPD



ISSUES

1. TOOLS
2. INTELLECTUAL CAPITAL
3. WILL

HUMAN

RESOURCE

DEVELOPMENT

ON BECOMING

In the end, it is important to remember

that we cannot become what we need

to be by remaining what we are.

Max De Pree Leadership Is An Art, New York, NY
Doubleday, 1989

SYNTHESIS PAPER EVALUATION

	5	4	3	2	1	0
Title Page	_	_	_	_	_	_
Table of Contents	_	_	_	_	_	_
Review of Learning Contract (Why, What)	_	_	_	_	_	_
Transition to Papers	_	_	_	_	_	_
Analysis of Papers	_	_	_	_	_	_
Transition to Summer Institute	_	_	_	_	_	_
Analysis of Summer Institute	_	_	_	_	_	_
Sunday Session	_	_	_	_	_	_
Specialization Sessions	_	_	_	_	_	_
Other Sessions	_	_	_	_	_	_
Saturday Session	_	_	_	_	_	_
Synthesis of Papers and Summer Institute	_	_	_	_	_	_
Conclusion	_	_	_	_	_	_
Grade	_ HP	_ P	_ LP	_ Rewrite/ Fail	_	_

Criteria: organization, presentation, completeness, relevancy, cogency, and documentation.

1531 Peabody Avenue
Memphis, TN 38104
August 14, 1990

U. C. More Clearly
2020 Vision Ecstacy Pinnacle
Information Era, World 20001

Dear U. C.:

Congratulations. You have successfully completed the synthesis paper for E-VTO, an important learning experience in the Nova University Programs for Higher Education. Hopefully, this problem-solving process based on the three stages of leadership (analysis, vision, and action plan) gave you insights into solution-based education and how to restructure human resources development systems so that we ultimately have improved quality of life for all persons.

Match job responsibilities and PHE program requirements. Specify problems in your work context and consider them as opportunities for practicums and MARPs. Continue to develop files for areas of special interest. Keep networking with fellow students. I am online with Nova - "groffw."

My teaching and consulting schedule takes me to many cities. Although my primary focus must be on specific tasks, I shall always attempt to find time for students in VTO and PHE. I am helping the Nebraska Technical Community College Association implement strategic planning and assisting Mercer County Community College develop a set of strategic directions to which PHE students can link research and scholarship. I will address the presidents of the 19 state Commission of North Central Community and Junior Colleges and lecture in Taiwan in late November and early December.

The world is going through a paradigm shift somewhat similar to the transition from an agricultural era to the industrial era. During that transition, vocational education was institutionalized alongside academic education. Today, a few communities are in the earliest stages of **fundamental restructuring** -- realigning existing establishments and creating new ones. The change is different in magnitude and speed -- macro and fast. VTO has a unique role to play in this shift. Enclosed is a list of information about restructuring. It is a pleasure working with you.

Sincerely,

Warren H. Groff
901-725-5287

RESTRUCTURING

America 2000 1-800-872-5327

What Work Requires of Schools: A SCANS Report for Am 2000
U.S. Department of Labor
SCANS, C-2318
200 Constitution Ave., NW
Washington, DC 20210
1-800-788-SKILL

Whittle Schools and Laboratories
505 Market Street
Knoxville, TN 37902
615-595-5000

Catholic Schools For the 21st Century
National Catholic Education Association
1077 30th Street, NW, Suite 100
Washington, DC 20007-3852
202-337-6232

Results In Education series
National Governor's Association
444 North Capitol Street, Suite 250
Washington, DC 20001-1572
202-624-5300

Regional forums document and Public Testimony 1 and 2
National Education Goals Panel
1850 M Street, NW, Suite 270
Washington, DC 20036
202-632-0952

Next Century Schools
RJR Nabisco Foundation, Suite 550
1455 Pennsylvania Avenue, NW
Washington, DC 20004
202-626-7200

New Partnerships ($1.00) and What It Takes: Structuring Interagency Partnerships to Connect Children and Families With Comprehensive Services ($3.00).
Education and Human Services Consortium
Suite 310, 1001 Connecticut Ave., NW
Washington, DC 20036-5541
202-822-8405

Collaborations In Action: Reshaping Services To Young Children And Their Families & The 21st Century Sch Program
The Bush Center in Child Development and Social Policy
P.O. Box 11A, Yale Station
New Haven, Connecticut 0650-7447
203-432-4570

Practicums

VTO PRACTICUMS

1. Sept. 20, 1989 James C. Scott P-HRD

A Study to Analyze Students' Awareness of the Career Resource Center's Services

2. Sept. 23, 1989 Brian Saterlee P-HRD

A Study to Determine the Job Satisfaction of the Engineering - Industrial Technology Faculty at Delgado Community College

3. Sept. 30, 1989 Onesima Santos E-VTO

Comparison of Pre and Post Mean Scores in Accuracy Performance After a Formal-Directed Proofreading Instruction

4. Oct. 23, 1989 Betty Reynaud P-HRD

Comparison of Stress of Industrial Arts Teachers with Business Education and Home Economics Teachers

5. Jan. 3, 1990 Jerrold Backman P-HRD

Development of Training Seminar to Enable Industrial Arts Instructors to Teach High Technology Curriculum in Sarasota County

6. Jan. 29, 1990 Mary Alice Watson P-HRD

The Development of a Competency-Based Instructor Evaluation Instrument for the Heart of Georgia Technical Institute

7. Feb. 12, 1990 Michael Wayne Cupples P-HRD

A Study To Survey The Workers' Attitudes Concerning Computers in the United States Army Aviation Center

8. April 9, 1990 Vicky B. Cooke E-VTO

The Development and Analysis of a Questionnaire to Determine Career Counseling Needs in Local Industry

9. April 23, 1990 B. Ann Harang E-VTO

Development of an Early Alert System for At Risk Students in the Business Studies Division at Delgado Community College

10. July 29, 1990 Ken Gordon E-VTO

A Survey of the Microcomputer Training Needs of George Stone Center

11. July 29, 1990 Carolyn A. Standridge E-VTO

The Development of a Plan to Improve Mental Health Treatment to Students with a Mental Health Diagnosis

12. August 9, 1990 Keith Ellen Ragsdale E-VTO

Identification of New and Anticipated Technology Affecting Nursing Practice In Austin Area Hospitals

13. September 9, 1990 Robert L. Hooks E-VTO

A Study to Develop a Single-Parent and/or Displaced Homemaker Brochure for the Office of Student Development at the Moultrie Technical Institute

14. September 9, 1990 Robert L. Hooks P-HRD

A Study to Develop a Financial Aid and Consumer Information Brochure for the Office of Student Development at the Moultrie Technical Institute

15. September 27, 1990 Denny Woodall Neilson E-VTO

The Development of a Cooperative Education Plan for the Darlington County School District

16. October 4, 1990 Keith Ellen Ragsdale P-HRD

Determinstion of the Effect of Student Admission Criteria and The Admission Process on Admission of Minority Students to Associate Degree Nursing Programs

17. December 3, 1990 David Ryan P-HRD

Comparison of Traditional and Innovative Methods of Teaching Entrepreneurship (Completed February 26, 1991)

18. December 6, 1990 Nita I Heck E-VTO

Development of a Plan To Minimize Potential Health Hazards Associated With Increased Utilization of Video Display Terminals

19. Dec 17, 1990 - Mar 21, 1991 James David Platner P-HRD

Analyzing Leadership Style and the New Director's Impact Upon Faculty and Students at Metro Business College

20. January 26, 1991 Alexander Peng My E-VTO

Identification of New and Anticipated Equipment Affecting Machine Technology Practice of Los Angeles Area Manufacturers

21. February 26, 1991 Alexander Peng My P-HRD

Survey of Industry to Determine Interest in and Need for a Technician-Level Training Certificate in Machine Technology

22. Alma F. Shamblin P-HRD

A Comparison of Achievement Scores Using A Remedial and Traditional Unit of Instruction in Business Mathematics

23. April 11, 1991 Beulah G. Timmons P-HRD

Development of Inservice Projects for Personnel in Small Clinical Laboratories: Utilization of a Staff Development Model

24. Linda Sweat P-HRD

A Survey of Communication Skills That Aircraft Sheet Metal Emploers in the Heart of Georgia Technical Institute Service Area Expect of Employers.

25. Napoleon Mills E-VTO

Development and Validation of an Apprenticeship Program for Firefighters and Fire-Medics.

26. Yng-Chien Sheu E-VTO

An Analysis of the Skills Necessary for Offset Printing Graduates of Vocational Technical School in Taiwan

27. Beulah G. Timmons E-VTO

The Development and Utilization of a Survey Form for Education Project Evaluation by Technical Personnel in Small Clinic Laboratories

28. Donald J. Clausing P-HRD

A Comparison of Changes In Job Satisfaction Among The Faculty of The Engineering And Technology Division at Delgado Community College.

29. Margit O. Giles P-HRD

The Development of A Dropout Prevention Plan for Brookland-Cayce High School

30. Joyce Pappachristou P-HRD

The Comparison of Traditional Instruction Verses Televised Instruction on Recidivism For Prison Inmates

31. Polly A. Schultz E-VTO

A Study To Determine Whether A Relationship Exists Between A Student's Grade Point Average And Number of Hours Worked

32. Sarah Simpson-Ussery P-HRD

The Development of a Literacy Tutor Training Workshop For Loxley Inmates

33. Ralph Gracia E-VTO

The Development of a Reference Manual on the Advanced Tactical Fighter for the Defense Plant Representative Office

34. Sarah Simpson-Ussery P-HRD

The Development of a Vocational Component for Literacy and Adult Basic Education Student-Inmates at Loxley Correctional Facility

HRD Practica

No date means "in process"

1. Norma M. McKinnon, Jan 21, 1991

Development of a Professional Activities Handbook Governing Financial Assistance to Staff as Funded by the Title III Grant.

2. Richard Scott, Mar 21, 1991

Development of a Peer Collaboration Program for Faculty Development Through Improved Communications.

3. Charles R. Heck, Jr., Mar 31, 1991

Development of a Course/Instructor Evaluation Form...

4. Jean Love, Apr 2, 1991

The Design, Implementation, and Evaluation of a Professional Development Workshop.

5. Dolores Yaschur, May 12, 1991

Development of a Document that will Serve as a Working Plan for the Implementation of an Employment Affirmative Action Policy.

6. Weymouth Spence

A Cost Analysis Study of the Radiography Program at Middlesex Hospital Using Shock's Model.

7. Jennifer Dowd

Development of a faculty Search Committee Guide for Mercer County Community College.

8. Ronald Williams

Improvement of Attendance Rates Through the Implementation of a Student Tracking System at New York City Tech College

9. Walter A. Meyer.

Development of a Training Reference Manual for College Faculty Who Train in Business and Industry.

10. Sherry A. Dunphy.

Development of a Training Program for Cholesterol Screening Personnel.

11. Robert D. Bolge

Development of a Plan To Make the Office of Institutional Research A Human Resources Development Utility at Mercer County Community College.

12. Elon W. Roach

Development of a Plan to Train Middle Level Administrators in Strategic Planning.

13. Pamela B. Farrell

Design for A Writing Accross the Curriculum Faculty Retreat.

14. Anthony J. Mennuti

The Development of a Grant Management Handbook: A guide for Grant Project Managers.

15. Susan Ross Bell, June 26, 1991

Identifying Classroom Motivating Factors in the School of Business at Missouri Southern State College.

16. Mary Pat Neylon

The Development of an Orientation Manual for New Part Time Faculty at Molly College.

17. Polly A. Schultz

Developing A Workshop To Train The Secretaries Employed By Villa Julie College To Use The Tab Feature In Wordperfect 5.1.

18. John L. Coleman

Assessing the Morale of the Kansas City Missouri Police Department and the Need for an Effective Human Resources Utilization Program.

19. Alice L. O"Neill

Development of an Orientation Program for Adjunct Health Administration Faculty at the University of Scranton.

20. Steven B. Dowd

An HRD Action Plan for the Radiography Program Sponsored By Lincoln Land/St. John's Based on a View of the Radiographer of the Future.

21. Ronald Kopcho

An Evaluation of Humanities Division Faculty Perceptions of the Need for a Multicultural/International Dimension in Curricula, Graduates, and Activities.

22. Andrew Niesiobedzki

Development, Implementation, and Evaluation of a Workshop on Conflict Resolution for the Division of Arts and Letters at Manatee Community College

23. Ken James

Development and Validation of a Workshop on Basic Maintenance for Industrial Technology Education Instructors in Polk School Districts

24. Valerie Zimbaro

The Development and Validation of a Strategic Human Resources Development Plan for the St. Petersburg Junior College Communications Program

25. Robert D. Head

The Development of a Policy and Procedures Handbook for Music Faculty at Shaols Community College

Leadership For Innovation And Change Workshop

- LEADERSHIP
  - VISION
  - MS = OD + HRD

FOR

- INNOVATION
  - INVENTIONS
  - DISCOVERIES

AND

- CHANGE
  - MAGNITUDE (MACRO)
  - RATE - SPEED (FAST TRACK)

LEADERSHIP FOR INNOVATION AND CHANGE

Between now and the year 2000, the U.S. will face challenges that will shape the future of the quality of life for the 21st Century. U.S. schools are undergoing changes as profound as the creation and spread of the "common school", the expansion of secondary schools, the globalization of American education, and the war on poverty through equal education opportunity. U.S. colleges and universities are undergoing changes as profound as the development of the private college, the transformation of nineteenth century small colleges into universities, the evolution of land-grant universities, and the creation and spread of two-year colleges. The difference between the earlier revolutions and the changes education will experience in the 1990s has a focus primarily on two dimensions -- magnitude and rate. The 1970s and 1980s could be labeled "modernization" of the contemporary traditional industrial era institutions while the 1990s could be called "restructuring" to create entirely new alternative information era institutions. If the U.S. is to be the beneficiary, and not the victim, of restructured institutions, some way must be developed and implemented to produce the critical mass of intellectual capital to translate know-how and good research into action plans, to produce and apply research and to reduce the lag between the development of new knowledge and its application in new "world class" caring and learning environments.

Research indicates that leadership occurs at three levels -- self, organization, and society -- and consists of three steps: analysis and evaluation, creative futures visioning, and transforming visions into action. Research also indicates that there is need for a "New Professional" -- a visionary, proactive, transformational leader with conceptual skills in intermural strategic visioning of new caring and learning environments and human and technical skills in consensus building, shared responsibility, interagency cooperation, family and school partnerships, cultural diversity responsiveness, integrated development, and designing and implementing "Learning Communities."

The Leadership for Innovation and Change (LIC) seminar content and format is based several years of development of materials to prepare strategic thinkers used in two different doctoral programs and in a week long seminar on strategic planning and thinking. The LIC seminar format is divided into four increments of learning: synthesis of research about leadership, analysis of society and education and training, developing visions of the future, and specifying action plans.

1. The seminar leader will present a synthesis of seminal works on leadership. Each participant will identify

up to six significant concepts and implications for her/his work context. Then, participants with similar planning preferences, based on a diagnostic test, will discuss in small groups the significant concepts and implications. This increment of learning will conclude with an interpretation of the challenges for the 1990s.

2. The seminar leader will present an analysis of conditions of society and systems -- health and human services, business and industry, government and the military, and education and training. Changes in society and work contexts must be viewed as opportunities for various sectors of the learning enterprise based on the strengths of each sector. Each participant will identify up to four opportunities based on the environmental analysis and specify up to four strengths for any one of the three levels of leadership. Then, participants will discuss in small groups the opportunities and strengths. This learning segment will conclude with an interpretation of significant changes in the emerging global information society and developmental challenges for the 1990s.

3. The seminar leader will present visions of the future and elaborate on strategic directions and tactical alternatives. Each participant will identify up to three strategic directions and up to four tactical alternatives for one or more strategic directions. Then, participants will discuss tactical alternatives based on similarities of strategic directions. Each participant is expected to then focus on one strategic direction with a refined and an expanded set of tactical alternatives. This learning segment will conclude with an interpretation of significant strategic directions and tactical alternatives to meet the developmental tasks of the 1990s and 21st Century.

4. The seminar leader will present facets of action plans highlighting goals and objectives and methodology. Each participant will specify up to three goals for her/his one strategic direction and up to three objectives for each goal followed by a brief statement about methodology for each objective. This learning segment will conclude with an interpretation of methodological issues and resources.

Seminal publications of the 1990s will be discussed and materials and resources from organizations will be available to participants. Participants are expected to share leadership projects in which they are involved.

LIC will help each participant to acquire new conceptual, human, and technical competencies and skills necessary to improve quality of life through developing world class "Learning Communities of the Future."

LEADERSHIP

ACTIVITIES

Levels	ANALYSIS AND EVALUATION	CREATIVE FUTURES VISIONING	TRANSFORM VISIONS TO ACTION
SELF			
ORGANIZATION			
SOCIETY			

THE NEW PROFESSIONAL

Visionary, Proactive, Transformational Leadership

1960s	1970s	1980s	1990s
Equality within a System			Intermural strategic planning strengths - Opportunities - Culture & Climate; Mission specialization; Program Review; Enrollment Management; Functional Analysis; Institutional Effectiveness
Excellence within a Subsystem			Intermural Strategic Visioning New Caring and Learning Environs
Founders of Public Service Agencies			Consensus Building Shared Responsibility Interagency Collaboration Family & School Partnership Cultural Diversity Responsive Integrated Development Learning Communities

RESEARCH

SIGNIFICANT CONCEPTS	IMPLICATIONS
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

ANALYSIS

OPPORTUNITIES	STRENGTHS
1.	1.
2.	2.
3.	3.
4.	4.

VISION

STRATEGIC DIRECTIONS	TACTICAL ALTERNATIVES
1.	1a. 1b. 1c. 1d.
2.	2a. 2b. 2c. 2d.
3.	3a. 3b. 3c. 3d.

ACTION PLAN

GOALS AND OBJECTIVES	METHODOLOGY
1. a. b. c.	1. a. b. c.
2. a. b. c.	2. b. c. d.
3. a. b. c.	3. a. b. c.

Seminal Research on Leadership: From Tao to the 1990s

Lao Tzu	Tao Te Ching	6th Century BC
Maslow	Motivation And Responsibility	1954
Burns	Leadership	1978
Cuningham	Leadership in the Future	1983
Bass	Leadership And Performance	1985
Heider	The Tao of Leadership	1985
Bennis	Leaders	1985
Hoyle	Skills For Successful School Leaders	1985
Tichy	The Transformational Leader	1986
UCEA	Leaders For America's Schools	1987
Manske	Secrets of Effective Leadership	1987
McDade	Higher Education Leadership	1987
Green	Leaders For A New Era	1988
Chaffee	Collegiate Culture and Leadership Strategy	1988
Stephens	Leadership For Rural Schools	1988
NASBE	Right From The Start	1988
Korn/Ferry	Reinventing the CEO	1989
Rosenbach	Critical Issues In Leadership	1989
Roueche	Shared Vision	1989
Lewis	Restructuring America's Schools	1989
Bennis	On Becoming A Leader	1989
Gardner	On Leadership	1990
Clark	Measures of Leadership	1990
Baker	Teaching As Leading	1990
Creswell	The Academic Chairperson's Handbook	1990
Vaughan	Pathways to the Presidency	1990

Analysis - Societal Context

Murray	Losing Ground	1984
AFL-CIO	The Polarization of America	1986
AFL-CIO	Crossroads for America	1986
NUL	The Status of Black America	1987
CDF	The Health of America's Children	1987
Edelman	Families in Peril	1987
N L Cities	Poverty In America: New Data, New Perspectives	1987
OTA	Healthy Children: Investing In Children	1987
N L Cities	Cities and the Future of the U.S. Economy	1988
CDF	Vanishing Dreams	1988
Schorr	Within Our Reach	1988
Grant Fdn	The Forgotten Half: Non-College Youth in America	1988
Grant Fdn	The Forgotten Half: Pathways to Success For Youth	1988
DE-OERI	Youth Indicators: Trends in the Well-Being of Youth	1988
AACJC	Keep America Working: Profiles In Partnership	1988
Mishel	The State of Working America	1988
Marshall	Workforce Policies for the 1990s	1988
ACE & ECS	One-Third of A Nation	1989
Carnegie F	An Imperiled Generation	1989
Grant Fdn	American Youth: A Statistical Profile	1989
D of Labor	Investing In People	1989
CDF	The Health of America's Children	1989
CDF	Children 1990: A Report Card, Briefing Book & Action	1990
Burtless	A Future of Lousy Jobs?	1990
NCFR	2001: Preparing Families For The Future	1990
NASBE AMA	Code Blue: Uniting for Healthier Youth	1990

Analysis - Systems

Perkins	Higher Education: From Autonomy to Systems	1972
Boyer	Higher Learning in the Nation's Service	1981
Peters	In Search Of Excellence	1982
Gardner	A Nation At Risk: The Imperative for Ed Reform	1983
Mortimer	Involvement In Learning	1984
Wiant	Linkages of Voc Ed and Related Services Deliverers	1984
NCRVE	The Unfinished Agenda: The Role of Voc Ed in H.S.	1984
D Ed	The Nation Responds: Recent Efforts to Improve Ed	1984
Goodlad	A Place Called School	1984
AASCU	Degrees With Integrity	1984
Parnell	The Neglected Majority	1985
Hodgkinson	All One System	1985
Eurich	Corporate Classrooms	1985
Alexander	Time For Results	1986
Campbell	What Happened To High School Seniors	1986
AACJC	Challenges For The Urban Community College	1986
Carnegie	A Nation Prepared: Teachers for the 21st Century	1986
Sedlak	Selling Students Short	1986
Roueche	Profiling Excellence in America's Schools	1986
Bowen	American Professors: A Natural Resource Imperiled	1986
Roueche	Access and Excellence	1987
Carnegie	The Undergraduate Experience In America	1987
Purcel	The Context & Character of Postsec Voc Ed in 2000	1987
Lynch	Priorities for Research & Development in Voc Ed	1987
United Way	The Future World of Work	1988
Copa	Vocational Ed And High Sch Graduate Requirments	1988

Corcoran	Working In Urban Schools	1988
AACJC	Minorities In Urban Community Colleges	1988
Ewell	Assessing Institutional Effectiveness	1988
AASCU	Minorities in Public Higher Education	1988
Wirt	National Assessment of Vocational Education	1989
Carnegie	Tribal Colleges	1989
Perelman	Closing Education's Technology Gap	1989
Carnevale	The Learning Enterprise	1989
Firestone	Progress of Reform: Appraisal of State Initiatives	1989
D Ed	Projections of Educational Statistics to 2000	1989
Metro Life	Preparing Schools for the 1990s	1989
Metro Life	The American Teacher 1989	1989
Perelman	The "Acanemia" Deception	1990
Chubb/Moe	Politics, Markets, and American Schools	1990
Northdraft	SchoolWorks	1990
D of Labor	Participatory Leadership: School and the Workplace	1990
Lenth/Sheeo	State Priorities in Higher Education: 1990	1990
NCTPP	From Gatekeeper to Gateway: Transforming Testing	1990
Bolman	Re-Thinking Sch Leadership: Agenda for Res/Reform	1990
Carnevale	Training Partnerships: Linking Employers & Providers	1990
Daggett	Preparation For Employment In the 1990s	1990
Grubb	The Cunning Hand, The Cultured Mind	1990
Virginia	Commission on The University of The 21st Century	1990
NGA	Educating Am: State Strategies to Achieve Nat Goals	1990
ECS	New Strategies for Producing Minority Teachers	1990
Daggett	Preparing For Employment in the 1990s	1990
Ontario	Vision 2000: Quality and Opportunity	1990

Vision

Gleazer	Values, Vision, and Vitality	1980
Rutter	The Essential Community: Local Govt in 2000	1980
Botkin	Global Stakes	1982
Gappart	Cities of the 21st Century	1982
Didsbury	The Work of Work: Careers and the Future	1983
Russell	Alternative Futures for Voc and Tech Ed	1983
Lamm	Megatraumas: America at the Year 2000	1985
Cline	The Electronic Schoolhouse	1986
Gooler	The Education Utility (Jack Taub)	1986
Groff	Perspectives on the Ed and Tr System	1986
Haas	Educational Futures: Six Scenarios	1986
AASCU	To Secure the Blessings of Liberty	1986
Groff	The Learning Community of the Future	1987
Norenberg	Distant Learning of Voc Ed Technologies....	1987
Hudson Inst	Workforce 2000: Work & Workers in the 21st Century	1987
Cornish	Careers Tomorrow	1988
AACJC	Building Communities: A Vision For The New Century	1988
CDF	A Vision for America's Future	1989
Cetron	American Renaissance	1989
Norris	Community College Futures: From Rhetoric To Reality	1989
United Way	What Lies Ahead	1989
Kiplinger	America in the Global '90s	1989
Cornish	The 1990s & Beyond	1990
Didsbury	The Future: Opportunity Not Destiny	1989
Cetron	Educational Renaissance: Schools in 21st Century	1990
Parnell	Dateline 2000	1990

Plan of Action

American Federation of Teachers

Radius
Professional Practice Schools: Building A Model
Proposals & Plans For Restructured Schools
Selected Contract Provisions & Related Programs
AFT Resource Kit on Restructuring

Campus Compact - Education Commission of the States

California Compact
Michigan Campus Compact
Pennsylvania Campus Compact

Council of Chief State School Officials

Success for All in a New Century: Restructuring Education (1989)
Restructuring Schools: A Policy Statement of CCSSO (1989)
Community Education: A Guide For State Initiatives (1989)

Dept of Education, Office of Educational Research & Improvement

ERIC Clearinghouses
Leadership in Educational Administration Development (LEAD) Program
National Center for Educational Statistics Survey
National Diffusion Network
National Research and Development Centers
Regional Educational Laboratories
Star Schools Demonstration Projects
Fund for the Improvement and Reform of Schools and Teaching
Secretary's Fund for Innovation in Education
Choice in American Education (1989)

Foundations

Casey Foundation	New Futures
RJR Nabisco	Next Century Schools

Holmes Group

Tomorrow's Teachers (1986)
Tomorrow's Schools: Principles For The Design of Prof Dev Schs (1990)

National Association of State Boards of Education

Code Blue: Uniting for a Healthier Youth (1990)

National State Boards Association

Joining Forces (1990)

Office of Technology Assessment, Congress of the U.S.

Power On (1988)
Critical Connections: Communication For The Future (1990)

Rand Corporation

Beyond the Commission Reports (1984)
Redesigning Teacher Education (1990)

Phi Delta Kappa

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POSTSCRIPT

From Awareness To Commitment: Preparing Transformational Leaders for the 21st Century

From Awareness of Need To Commitment: Preparing Transformational Leaders for 21st Century

My involvement with two doctoral programs at Nova University parallels the research about the adoption of technology by establishments. Establishments pass through stages that can be labeled awareness, interest, evaluation, trial, and adoption. So too, individuals progress through stages of development that can be labeled awareness, interest, understanding, commitment, and dedication. I first became aware of Nova's emergence when I was an Administrative Assistant and then an Assistant Dean in the College of Education at Temple University and taught courses in higher education in the late 1960s. I collected information about nontraditional institutions and held discussions about them in doctoral seminars. I developed greater interest in Nova's programs when John Scigliano asked me to serve on an advisory committee at Kent State University and I obtained information about the Programs for Higher Education (PHE). While serving as Vice President for Academic Affairs at North Central Technical College in Mansfield, OH, I won five PHE Practitioner Hall of Fame awards for papers in 1979, 1981, 1982, 1983, and 1984.

Because of my background and experience, Ross Moreton asked me to teach the vocational, technical, and occupational education seminars in PHE. I taught "Personnel - Human Resources Development" in 1984, 1986, 1988, and 1990 and "Emergence of Vocational, Technical. and Occupational Education in America" in 1985, 1987, and 1989. The 1984-1985 cycle is described in "Preparing Agents of Change in Vocational, Technical, and Occupational Education in America"(ED 272 247, 1986), the 1986-1987 cycle in "Preparing Transformational Leaders in Vocational, Technical, and Occupational Education"(ED 290 860, 1987), the 1988-1989 cycle in "Toward the 21st Century: Preparing Strategic Thinkers in Vocational, Technical, and Occupational Education" (ED 053 431, 1989), and the 1990-1991 cycle in "Toward the 21st Century: Preparing Strategic Thinkers in Vocational, Technical, and Occupational Education for Restructuring Establishments."

Since 1984, I taught 22 sections of the core seminar "Governance and Management" from Alaska and California to Florida and Massachusetts. I regularly obtain information about the structure of education, reform efforts, and policies from state departments and statewide coordinating agencies of states in which students work who are registered in the cluster. I often visits state officials and institutions where clusters are located.

I have made numerous other contributions to PHE. The 1987 Summer Institute was on the theme "The Independent Learner: Processes for Success." I was one of two persons who responded to the keynote address; my remarks are contained in "The Independent Learner: The Key Characteristic in Transformational Leadership"(ED 287 347, 1987). I have packaged exemplary strategic thinking work by students and engaged in significant classroom research to enhance student learning and document program outcomes. I am a member of the Higher Education Director's Team to analyze and to redesign PHE. At the February 1990 Director's Team meeting, a major decision was made to modify the curriculum. The Personnel specialization seminar became the core requirement Human Resources Development as of fall 1990. I serve as HRD Curriculum Coordinator. In addition, a Leadership seminar I proposed became a core requirment in fall 1991. I taught Leadership to seven students in the program transition. I began to serve as a Practicum Report Evaluator for VTO specialization seminars in fall 1989 and as a Major Applied Research Project (MARP) advisor in winter 1990.

I began to teach "Grantsmanship" in Program Development in the Early and Middle Childhood (EMC) Program in 1985. I began to teach Political Processes and Social Issues in 1986. I taught "Grantsmanship" to four clusters and PPSI to 18 clusters. Following PPSI in Cluster 20, I wrote "Preparing Advocates of Public Policy in Early and Middle Childhood" in January 1988. I wrote and presented "Proactive Advocacy of Public Policy in Early and Middle Childhood" at the Summer Institute in 1988.

During a faculty meeting to redesign EMC, I proposed Leadership I to start the new program and Leadership II to conclude it. I taught Leadership I for the first time in the Child and Youth Studies (CYS) Program in spring 1989. A National Cluster which makes extensive use of technology was started in February 1991. "Preparing Proactive Transformational Leaders" is a formative evaluation of Leadership I for Cluster 34 (ED 313 946, 1989). "Preparing Visionary Proactive Transformational Leaders for Children and Youth" is a formative evaluation of Leadership I for Clusters 34, 37, and 38 (ED 327 118, 1990). "Preparing Proactive Visionary Transformational Leaders in Child and Youth Studies Through Electronic Highways and Contemporary Communication and Information Technologies" is a formative evaluation of Cluster 46. I taught Leadership I to five of eight clusters and will teach Leadership II this fall.

I summarized the progress made in these programs and in the Snowmass Institutes on Strategic Planning in "Toward the 21st Century: Preparing Strategic Thinkers in Graduate and Postgraduate Education" (ED 327 117).

During 1989-90 I taught nine doctoral seminars on political processes and social issues, governance and management, and leadership to 206 students from many states, Canada, Korea, and Taiwan. I taught P-HRD to 43 students from these same countries. I researched education restructuring projects promoted by national organizations and various states and systems which are supported by foundations and the federal government. I am particularly interested in how institutions are restructuring VTO education.

I regularly make presentations at the PHE Summer Institute. The theme of the 1990 Summer Institute was "Leadership for Innovation and Change." I made a presentation on "Vision: Thinking Strategically About the 21st Century" that became the conceptual framework for a two day workshops on that theme in Ft. Lauderdale in January 1991. The theme of the 1991 Summer Institute was "Intrapreneurship in Postsecondary Education." I made a presentation on "Intrapreneurship in the Era of Smart Homes, Wired Communities, Fast Systems, Global Networks, and Fast Forward Learners in a Borderless World." The presentation was made so that participants were alumni at a stakeholder meeting of the learning enterprise looking back from the 21st Century to review the activities of the Task Force on Rethinking for Restructuring, PHE program redesign based on demonstrated leadership through a solution-based conceptual framework, and an Interdisciplinary Postgraduate Diplomate program to provide proactive leadership in restructuring establishments created during the industrial era.

During 1990-91 I taught 12 seminars to 264 students and served as a Practicum Report Evaluator for VTO and HRD, as an evaluator for the Comprehensive Examination, and as a MARP advisor in PHE. My emphasis on transformational leadership can be seen on MARP topics such as "Education and Training Requirments in the Implementation of Communication and Information Technologies at the United States Army Aviation Center" and "The Development, Implementation, and Evaluation of a Model for the Review of Associate in Science Degree Programs." A third student is preparing a MARP prospectus for a futures scenario with a focus on education and health delivered through contemporary technology.

In addition to the eleven above-listed papers, I wrote the study guides for P-HRD (1984), E-VTO (1985), Leadership I (1988); wrote a section of Governance and Management; revised PPSI; and converted the P-HRD study guide to HRD. I prepared a comprehensive Resource Manual for P-HRD 1990 that included four sections: (1) readings related to the seminar; (2) practicum and Major Applied Research Project ideas and survey instruments, (3) proposal development and evaluation protocols, and (4) sources of information. Another paper, still in draft form, is intended to assess the impact of practicums and MARPs of four PHE-VTO students on a small technical college. I currently serve as Curriculum Coordinator for HRD and provide leadership in developing a new HRD study guide for use in 1992-93.

During 1991-92 I will teach Leadership I and II, Human Resources Development, Political Processes and Social Issues and Governance and Management. Several truly exciting experiences will include teaching Leadership II to two of the cluster that will be finishing the CYS program and the opportunity to document value added based on several variables. Second, a second National Cluster will be started in February 1992 with increased use of technology such as small groups in multiple electronic classrooms and use of the electronic library. Third, teaching Governance and Management after having taught Human Resources Development to the Philadelphia Cluster will provide opportunity to understand more fully the significant content areas of both seminars as well as continue to work with an institution developing a strategic planning process which will yield goals to which the research and scholarship of eight employees can be linked.

Practica and Major Applied Research Projects (MARPs) provide insights about the relationship between research and theory and its application to problem solving. Of the 29 VTO practica, 12 of 16 P-HRD and 10 of 13 E-VTO projects have been completed in the 1990-1991 cycle. The first HRD praccticum was submitted in January 1991; six of 23 practica have been completed. MARPs on program review, development of a HRD plan for a military institution, and the study of the impact of barcoding and smart card technology on health care delivery and health occupations education should make significant contributions to institutions.

The above mentioned activities represent total commitment and dedication to the practitioner-oriented, problem-solving and field-based philosophy in the development of doctoral programs intended to produce transformational leaders. Program development experiments have focused on contract learning, professional development plans, higher order cognitive synthesis, journal analysis of significant concepts and implications, transformational leadership skill development, and visioning of scenarios of the future that include fundamental restructuring of education and other establishments. The U.S. must continue to transition from the scholastic culture of the middle ages to "Learning Communities of the Future." To do that, the U.S. needs the critical mass of intellectual capital -- bold, creative, visionary, proactive, transformational leaders and followers who raise one another to higher levels of morality and motivation for improving the quality of life of all people.

Doctoral Seminars Taught for Nova University

Higher Education - Governance and Management

1. Fall 1984 Chicago, IL 2. Wint 1985 Birmingham, AL
3. Spri 1985 Pensacola, FL 4. Fall 1985 Greenwood, SC
5. Fall 1985 Phoenix, AZ 6. Wint 1986 Boston, MA
7. Fall 1986 Dallas, TX 8. Wint 1987 Richmond, VA
9. Wint 1987 Anchorage, AL 10. Wint 1987 Santa Ana, CA
11. Spri 1987 Pensacola, FL 12. Fall 1987 Springfield, MO
13. Wint 1988 Greenwood, SC 14. Fall 1988 Dallas, TX
15. Fall 1988 Pittsburgh, PA 16. Wint 1989 Santa Ana, CA
17. Spri 1989 Pensacola, FL 18. Fall 1989 Springfield, MO
19. Wint 1990 Greenwood, SC 20. Fall 1990 Dallas, TX
21. Fall 1990 Pittsburgh, PA 22. Wint 1990 Springfield, MA

H. ED. - Vocational, Technical, & Occupational Education

1. Summer 1984 Personnel - Human Resources Development
2. Summer 1985 Emergence of Voc., Tech., & Occup. Ed.
3. Summer 1986 P - HRD
4. Summer 1987 EVTOE
5. Summer 1988 P - HRD "Workforce of the Future"
6. Summer 1989 EVTOE "Workplace of the Future"
7. Summer 1990 P - HRD "Workforce of the Future"
8. Summer 1991 EVTOE "Workplace of the Future"

Ed. D. in Early & Middle Childhood - Grantsmanship

1. Fall 1985 Tampa, FL (Cluster 17)
2. Summ 1986 Ft. Lauderdale, FL (Cluster 18)
3. Summ 1986 Indianapolis, IN (Cluster 20)
4. Spri 1987 Wilmington, DE (Cluster 21)

Ed. D. in Early & Middle Childhood - Political Processes and Social Issues

1. Wint 1986 Wilmington, DE (Cluster 15)
2. Fall 1986 Tampa, FL (Cluster 17)
3. Spri 1987 Ft. Lauderdale, FL (Cluster 18)
4. Fall 1987 Indianapolis, IN (Cluster 20)
5. Wint 1988 Orlando, FL (Cluster 19)
6. Spri 1988 Wilmington, DE (Cluster 21)
7. Spri 1988 Ft. Lauderdale, FL (Cluster 22)
8. Wint 1989 Phoenix, AZ (Cluster 23)
9. Spri 1989 Chicago, Il (Cluster 24)
10. Fall 1989 Ft. Lauderdale, FL (Cluster 25)
11. Fall 1989 Wilmington, DE (Cluster 26a)
12. Fall 1989 Wilmington, DE (Cluster 26b)
13. Wint 1990 Tampa, FL (Cluster 27)
14. Wint 1990 Milwaukee, WI (Cluster 28)
15. Fall 1990 Jacksonville, FL (Cluster 29)
16. Wint 1991 Ft. Lauderdale, FL (Cluster 30)
17. Wint 1991 Shreveport, LA (Cluster 31)
18. Spri 1991 Alexandria, VA (Cluster 32)

Ed. D. in Child and Youth Studies - Leadership I

1. Spri 1989 Ft. Lauderdale, FL (Cluster 34)
2. Fall 1989 Orlando, FL (Cluster 37)
3. Spri 1990 Ft. Lauderdale, FL (Cluster 38)
4. Fall 1990 Tampa, FL (Cluster 40)
5. Wint 1991 National (Cluster 46)

Higher Education Leadership

1. Via Independent Study for Students from P-HRD 1990

Human Resources Development

1. Wint 1991 Phila., PA 2. Spri 1991 Chicago, IL

Summary, June 1991

Seminar	Sections	Students
Governance and Mangement	22	300
Vocational & Technical Education	8	195
Human Resources Development	3	60
Political Processes & Social Issues	17	320
Leadership	6	160
Totals	55	1,035

* Grantsmanship taught to four sections prior to PPSI

** Grantsmanship introduced in five sections.
Includes one section of PHE Leadership

ERIC Documents

ED 186 060	Higher Education As A Catalyst to the Local Economy
ED 188 655	Planning Technical Education for the Eighties
ED 190 168	Human Resources Development in Technical Education
ED 190 179	A Model to Evaluate the Extent to Which Goals are Reached
ED 197 779	Environmental Trend Analysis & Strategic Decisions
ED 200 711	Trend Analysis as a Component of Comprehensive Planning
ED 201 030	Key Data Elements in a PME Syllogistic Model
ED 201 295	Key External Data in Strategic Decision Making
ED 201 343	Market Analysis. What Is It? How Does It Fit Into...?
ED 201 357	Technical Ed As A Catalyst: Retraining & Collaboration
ED 202 498	Shaping Society through Outcomes: Measuring Output
ED 212 946	Preparing Proactive Transformational Leaders, Cluster #34
ED 213 446	Strategic Planning: A New Role for Mg Info Systems
ED 214 555	Statewide Coordination in Technology Transfer
ED 216 654	Strategic Planning: Matching Ext Assess with Int Audit
ED 217 907	Strategic Planning of Technology Transfer
ED 218 993	Entrepreneurship through Strategic PME
ED 219 007	Building Futurism into the Institution's SP and HRD
ED 221 249	Strategic Planning for Community Services & Continuing Ed
ED 223 273	Computer Literacy: Data & Info Processing as the Core
ED 227 888	Utilizing R & D Products in SP and HRD
ED 229 591	Econ & Soc Impact of Tran from Industrial to Info Society
ED 231 453	Assisting a College's Service Area in the Transition....
ED 233 651	Strategic Planning & Mg for the Third Wave
ED 236 394	Strategic Planning for Economic Development
ED 237 129	SP & Mg for Voc-Tech Ed at the Community College Level
ED 244 668	Quality Education. What Is It? (Nova #5)
ED 247 822	Strategic Planning for Economic Development
ED 259 804	Institutional Advance & Role of Resource Dev Office (NCRD)
ED 267 665	Snowmass Institute Report, 1985
ED 272 247	Preparing Agents of Change in Voc-Tech-Occup Ed, 1984-85
ED 271 184	Leadership: Vision & Sturcture (NCRD)
ED 272 772	Perspectives on the Education & Tr System of the Future
ED 280 538	The Learning Community of the Future: Ed & Tr in 21st (AACJC)
ED 287 347	Independent Learner: Key Characteristic In Trans Ldr, 1987
ED 290 860	Preparing Transformational Leaders in VTO, 1986-87
ED 298 977	Achieving Excellence Through SP, Smowmass Report, 1988
ED 313 946	Toward 21st Century: Preparing Proactive Trans Ldr, 1989
ED 319 882	Toward 21st Century: Prep Strategic Thinkers in VTO, 1988-89
ED 327 117	Preparing Strategic Thinkers in Grad & Postgrad Education
ED 327 118	Preparing Visionary Proactive Transformational Ldrs 34,37,38

EJ 212 639	Data as an Institutional Resource in a PME System
EJ 242 674	Key External Data Required in Strategic Decision Making
EJ 280 495	Strategic Planning of Technology Transfer
EJ 293 632	Strategic Planning - Jossey-Bass New Directions
EJ 295 399	Data Processing in the Post-Ind. Tech. Info Society, CAUSE
EJ 298 509	Education's Future Faces Four Great Challenges
EJ 312 404	Critical Mass: Education and the Economy

Warren H. Groff

Warren H. Groff is a consultant and a National Lecturer for Nova University. He taught in the public schools in Pennsylvania, served as an Assistant Dean in the College of Education at Temple University, consulted for the American Board of Pediatrics and the Governor's Justice Commission of Pennsylvania, served as Vice President for Academic Affairs at a private college, was the Executive Director of a consortium involving a medical college and two universities, served as Vice President for Academic Affairs for seven years and then Director of Research and Development at North Central Technical College in Mansfield, OH, and was Dean of Academic Assairs at Shelby State Community College in Memphis, TN.

He has written extensively on the topics of leadership, human resources development, strategic planning, and economic development. He chaired the statewide Task Force on High Technology for the Chancellor of the Ohio Board of Regents in 1982-83. From 1978 to 1986 he chaired the Plan Development Committee of an eight county health systems agency and also served as Vice President of the 45 member Board of Directors from 1984-86. In 1984 he chaired a 44 member Consolidation Committee for School Improvement for the Board of Education for the Mansfield City Schools. He served as president of the College of Education Alumni Society of the Pennsylvania State University from July 1984 through June 1986.

He has been one of two faculty for the week-long Snowmass Institutes on Strategic Planning for the past eleven years. He has conducted workshops on strategic planning for the Massachusetts Board of Regents; Tennessee Board of Regents; Directors of Research, Planning, and Development of the Vocational, Technical, and Adult Education Disticts in Wisconsin; Texas Association of Chief Community College Student Affairs Administrators; and the Nebraska Technical Community College Association. He has consulted with the National Center for Research in Vocational Education on selected projects. He has helped numerous institutions with strategic planning, in writing proposals, and accreditation activities.

He has taught 55 doctoral seminars to over 1,000 students throughout the U.S. for Nova University. He teaches Human Resources Development, Governance and Management, and Emergence of Vocational, Technical, and Occupational Programs in the Ed.D. Programs in Higher Education. He teaches Political Processes and Social Issues in the Ed.D. Program in Early and Middle Childhood and Leadership I and II in the Ed.D. Program in Child and Youth Studies.

He conducted a strategic planning workshop for the Office of Substance Abuse Prevention of the U.S. Department of Health and Human Services and has provided technical assistance to Building Community Partnership grantees.

He was graduated from Millersville University with a B.S. in Ed., from The Pennsylvania State University with an M. Ed., and from Temple University with an Ed. D.

TOWARD THE 21ST CENTURY: PREPARING STRATEGIC THINKERS IN VOCATIONAL, TECHNICAL, AND OCCUPATIONAL EDUCATION FOR RESTRUCTURING ESTABLISHMENTS

A Model: Polly A. Schultz

August 1991

Overview

Nova University was founded in 1964. In January 1972, Nova University created the Ed.D. Programs for Higher Education (PHE) with a focus on preparing community college personnel. That single program evolved into three areas of specialization: (a) Higher Education; (b) Adult Education; and (c) Vocational, Technical, and Occupational Education (VTO). The VTO specialization consisted of two seminars: Personnel - Human Resources Development (P-HRD) and The Emergence of Vocational, Technical, and Occupational Education (E-VTO).

During the early 1980s, PHE analyzed the format for the delivery of the specialization seminars. A new format was designed and implemented in 1984. The new format linked the specialization seminars to the Summer Institute (SI). Students receive materials and completed assignments prior to the SI, participate in SI activities that consist of theme session and specialization sessions, and then complete a synthesis paper.

Each of the two-year cycles is described in a paper. The 1984-1985 cycle dealt with **preparing agents of change** (ED 272 247). The 1986-1987 cycle had a focus on **preparing transformational leaders** (ED 290 860). The 1988-1989 cycle concentrated on **preparing strategic thinkers** (ED 319 882). The 1990-1991 cycle focused on preparing tranformational leaders who think strategically about **fundamental restructuring** of establishments created in the industrial era.

1991 E-VTO

Each student negotiated a learning contract with the national lecturer for required and elective units. Each student received an early June and a mid June memo intended to help guide her/him through the seminar. The mid June memo and packet asked each student to project demographic, social, economic, technological, and political trends for the 1990s and contained examples of projections, visions, and technology. Students were asked to bring articles to the SI. Each student completed assignments and then

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completed a one page analysis of significant concepts and their implications.

The specialization seminar met on Sunday at the SI. Following greetings and introductions, the national lecturer reviewed the Nova University philosophy, the VTO education specialization, and the E-VTO specialization seminar. Each student distributed a copy of Analysis I and projections for the 1990s to peers.

Seven groups developed action plans -- teaching and learning, business, health, engineering, distant learning, restructuring, and outreach for community development. Sunday and Monday stressed rationale, Tuesday - goals and objectives, Wednesday - methodology, Thursday - evaluation, and Friday - budget.

The theme of the SI was "Intrapreneurship In Postsecondary Education." Keynote follow-up sessions provided an opportunity to synthesize significant concepts. Nationally renowned speakers made presentations throughout the week on various topics related to the theme.

The specialization seminar met on Saturday morning and heard presentations from each of the groups.

Each student integrated Analysis I, significant concept and implications from the papers written prior to the SI, with Analysis 2, ideas obtained at the SI specialization and theme sessions.

The enclosed documents represent the work of Polly A. Schultz. doctoral student in the Philadelphia Cluster.

Warren H. Groff
National Lecturer
Programs for Higher Education
Nova University
August 1991

SPECIALIZATION SEMINAR CONTRACT

Individual Education Plan: Area of Major Concentration

After reviewing the study guide, I would like to study the following topics:

Unit III - REDESIGN OF THE EDUCATION SYSTEM

I would like to examine the broad picture with regard to vocational education as it moved into the technical area. My particular area of interest is the secretarial curriculum.

Unit IV - THE EMERGENCE OF THE TECHNICAL SOCIETY

There has been a tremendous change in the office workplace in the last ten to fifteen years. I would like to examine the changes that have affected office personnel as the office has been automated.

Unit VI - STUDIES ABOUT EDUCATION

There is so much information being generated about education today--good and bad points. In this unit, I would like to take the broad approach and look at the major changes that have been made in the overall methods applied to education. I may consider elementary as well as college.

Unit - 7 INTELLECTUAL CAPITAL FORMATION

This unit sounds very challenging. I am not at all sure I should be entering into a contract to complete this unit. I am interested in the combining of vocational and academic subjects. Information gathered from other seminars indicates a need for individuals with practical and intellectual training. We need to look to the future--to plan for the future and not just let it happen.

Student

Specialization Lecturer

May 29, 1991
Date

6-2-91
Date

EMERGENCE OF VOCATIONAL, TECHNICAL, OCCUPATIONAL EDUCATION IN AMERICA

REDESIGN OF THE EDUCATION SYSTEM

By

Polly A. Schultz

Villa Julie College

Warren H. Groff, Ed.D.

Summer Institute

A seminar paper presented to Nova University in
partial fulfillment of the requirements for the
degree of Doctor of Education

Nova University

June 12, 1991

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Appendix 7

From the Conant/Carnegie Foundation Report:
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    A Check List to Assist in Evaluating a Comprehensive High School
    States Included in the Study
    Vocational Education (Appendix F)

From Francis Keppel:
    Office of Educational financial assistance for elementary and secondary education
    Office of Education financial assistance for education research
    Chronology of major education legislation passed by the 88th Congress

From Robert F. Mager:
    Table of Contents (developing vocational instruction)

From Grant Venn
    Major Occupational Groups as a Percentage of Total Labor Force
    Percentage Change in Employment by Major Occupational Groups
    Number of Institutions Offering NDEA Title VIII Programs
    Enrollment in Area Vocational Education Programs

Organization Chart, United States Office of Education
    January 14, 1965
    July 1, 1965

Review of Literature

Russia sent Sputnik and American education into orbit. Thus, Congress passed the National Defense Education Act (NDEA) in 1958 when the nation agreed that the national defense, political supremacy and technological competence were interlocked with America's schools. The purpose of NDEA was to increase scientific, mathematical, and foreign language ability. Education was an investment in the future and the economy; the place where human resources could be developed (Gardner, 1961; Keppel, 1966; and Ravitch, 1983).

From 1958 on the merits and results of NDEA were debated. Conant conducted the Carnegie Corporation study (1956-1959) which included 26 states, and contained 21 recommendations; it recommended the spread of comprehensive high schools, ability grouping, blending academic excellence and democratic values, and implementation of innovative practices in staffing, curriculum, technology, and facilities (Conant, 1959 and 1963, and Ravitch, 1983). Vocational education was viewed as an outgrowth, supplement and enhancement to academic education. Conant felt the future should include a relationship between the high school and world of work and that "vocational education is an integral part of the total education program and requires aptitudes that students at the lowest academic level do not have" (Conant, 1959:123).

Bell (1966), Gardner (1961), Keppel (1966), and Venn (1964) examined the NDEA emphasis on talented students and the lack of broad education goals. The authors agreed that the demand for talent was a normal outgrowth of social development, technological complexity, and innovation. Venn (1964) recognized that work was becoming more cognitive because of automation. In addition, Title VIII of NDEA and Title III of George-Barden, created problems in interpretation, administration, and control of financial distributions. The 1961 Area Redevelopment Act and the 1962 Manpower Development and Training Act were attempts to meet technological job dislocation.

The purpose of the 1963 Vocational Education Act was to bring vocational education into harmony with labor market realities and form Federal-state cooperative programs (Paulter, 1990, and Venn, 1964). For the first time business and office occupations were included in legislation (NBEA, 1990). Innovative methods (programmed instruction, behavioral objectives, modular units) were developed and funded in vocational education (Mager, 1967, Schmidt, 1990, and Venn, 1964).

As social events changed, the Elementary and Secondary Education Act (ESEA) of 1965 focused on educating poor children. Gardner (1970) and Katznelson (1985) discussed the shortcomings of the ESEA. As early as 1961, Gardner observed three competing principles in education: hereditary privilege, competitive performance, and equalitarianism.

Authors differ on their evaluation of American education; for example, Katznelson (1985) felt that lack of agreement on equality and standards hinders education success while Ravitch (1983) believed that education is the way to prepare for the future. Toffler (1974) claimed that all education is a product of images of the future; he claimed that Sputnik "made everyone future oriented" (1974:3).

Implications

One of the most obvious implications from the research is that every President from Eisenhower to Bush has made education a priority. Educational objectives on the national level sound lofty; the Federal government tries to provide the opportunity for each geographical area to meet its particular needs. Today, the world has grown too small for a local district to direct its own activities. The Federal government and state education offices should develop a core curriculum to be used nationwide. With today's mobility, the feasibility of such a policy should be examined.

Education needs informed citizen involvement; citizens must understand that students have differing levels of ability. As a result of NDEA, vocational students experienced a loss of self-esteem. This happened as the nation began to move from an industrial era to the information age.

Several leading educators in 1958 seemed to be in favor of vocational education. Their definition of vocational education was clear; it provided high school students with the opportunity to become a specialist in some occupational area. Gardner's concept of educating both the generalist and the specialist is very good. Vocational students receive both an academic and occupational/technical preparation.

It was interesting to note that as early as 1960, educators were looking at the importance of automation and the effect it would have on the world of work as well as the classroom. In a sense, the Civil Rights movement distracted the nation's attention from the technological revolution.

Unfortunately, the changes in technology did not stop and as the nation turned its attention to the problems of poverty and racial injustice, technology continued to expand and change.

Passage of the Vocational Education Act (VEA) in 1963 signaled the need for more occupational education. Vocational education took on an expanded role; various new techniques were used--including programmed instruction and behavioral objectives; expanded distributive and cooperative education programs were developed; research was conducted and funded; and vocational education classes for adults were expanded. Vocational education students were made to feel good about their occupational choice.

In hindsight, however, vocational educators should have used the impetus of VEA to demonstrate their abilities, increase professional status, establish equivalent academic credit for vocational courses, update professional standards, and automate the curriculum. From 1964 on, the world of work was beginning a transition from manual to automated systems. As technology changed, faster and more abundant choices made decisive action difficult.

The VEA gave definition to business education. As a result, business educators added economics courses, published the first National Business Education Yearbook, and developed curriculum guides in a variety of areas. In 1965 word processing equipment was being used in business. Educators included the concept in the curriculum, but did not recognize the impact word processing would have on the profession.

REFERENCES

Bailey, Stephen K. ESEA The Office of Education Administers a Law. Syracuse, New York: Syracuse University Press, 1968.

Bell, Daniel. The Reforming of General Education. New York, New York: Columbia University Press, 1966.

Commager, Henry Steele. Documents of American History. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973.

Conant, James B. The Education of American Teachers. New York, New York: McGraw-Hill Book Company, Inc., 1963.

Conant, James B. The American High School Today. New York, New York: McGraw-Hill Book Company, Inc., 1959.

Conant, James B. Education and Liberty. New York, New York: Vintage Books, a Division of Random House, 1953.

Federal Role in Education. Washington, D.C.: Congressional Quarterly Service, 1965.

Gardner, John W. The Recovery of Confidence. New York, New York: W. W. Norton & Company, Inc., 1970.

Gardner, John W. Self-Renewal. New York, New York: Harper & Row, Publishers, 1963.

Gardner, John W. Excellence. New York, New York: Harper & Brothers, Publishers, 1961.

Katznelson, Ira and Margaret Weir. Schooling For All. New York, New York: Basic Books, Inc., Publishers, 1985.

Keppel, Francis. The Necessary Revolution in American Education. New York, New York: Harper & Row, Publishers, 1966.

Mager, Robert F. and Kenneth M. Beach, Jr. Developing Vocational Instruction. Belmont, California: Fearon Publishers, 1967.

Pautler, Albert J., Jr., ed. Vocational Education in the 1990s: Major Issues. Ann Arbor, Michigan: Prakken Publications, Inc., 1990.

Ravitch, Diane. The Troubled Crusade. New York, New York: Basic Books, Inc., Publishers, 1983.

Schmidt, B. June and Carol L. Jennings. A Chronology of Business Education in the United States. Reston, Virginia: National Business Education Association, 1990.

Toffler, Alvin. Learning for Tomorrow. New York, New York: Random House, 1974.

The Federal Government and Public Education. Washington, D.C.: American Association of School Administrators, 1965.

Venn, Grant. Man, Education, and Work. Washington, D.C.: American Council on Education, 1964.

APPENDIX

Criteria for Evaluating a Comprehensive High School

After visiting a number of schools, with the assistance of my staff I drew up a tentative list of criteria which would be useful in passing judgment on whether or not a given school was performing satisfactorily the three main functions of a comprehensive high school. In addition, I noted several features of school organization, the absence or presence of which seemed to me significant. A tentative list thus prepared was subjected to scrutiny by a number of experienced public school administrators, who made certain suggestions for improvement. As finally adopted, the list was as follows, and in all my reports I attempted to answer with a *yes* or *no* the questions implicit in the points listed:

A Check List to Assist in Evaluating a Comprehensive High School

A. Adequacy of general education for all as judged by:
  1. Offerings in English and American literature and composition
  2. Social studies, including American history
  3. Ability grouping in required courses

B. Adequacy of nonacademic elective program as judged by:
  4. The vocational programs for boys and commercial programs for girls
  5. Opportunities for supervised work experience
  6. Special provisions for very slow readers

C. Special arrangements for the academically talented students:
  7. Special provisions for challenging the highly gifted
  8. Special instruction in developing reading skills
  9. Summer sessions from which able students may profit
  10. Individualized programs (absence of tracks or rigid programs)
  11. School day organized into seven or more instructional periods

D. Other features:
  12. Adequacy of the guidance service
  13. Student morale
  14. Well-organized homerooms
  15. The success of the school in promoting an understanding between students with widely different academic abilities ,and vocational goals (effective social interaction among students).

Conant, James B. The American High School Today
1959.

STATES INCLUDED IN STUDY

- California
- Colorado
- Connecticut
- Delaware
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Missouri
- New Jersey
- New York
- Ohio
- Oregon
- Pennsylvania
- Rhode Island
- Texas
- Utah
- Vermont
- Virginia
- Washington
- Wisconsin

Appendix F: VOCATIONAL EDUCATION[*]

Definition: The term *vocational education* as used in this report applies to work at the high school level for which funds are provided under the national vocational education acts of 1917 (Smith-Hughes) and 1946 (George-Barden) or to work similarly organized but operating without federal assistance. Federal funds must be matched with state and/or local public funds. Federal funds are made available to state boards for vocational education (created by state laws) for salaries and travel of directors, supervisors, teacher-trainers, and salaries of vocational teachers under the provisions of the above-mentioned acts. The present national pattern for meeting the cost of vocational education programs is as follows: four dollars contributed by the states for every one dollar from the federal government. It should be noted that federal money supports both high school and adult programs and that there is a slight majority of the latter. Only high school programs are considered in this report.

Aim: The controlling purpose of vocational education programs at the high school level is to develop skills for useful employment. These programs relate schoolwork to a specific occupational goal but involve more than training for specific job skills.

Vocational education is not offered in lieu of general academic education, but grows out of it, supplementing and enhancing it. Vocational education is an integral part of the total education program and requires aptitude that students at the lowest academic level do not have. Slow readers, for example, are not able to benefit from regular vocational programs.

Operation: Each state has a Director of Vocational Education or the equivalent as part of its Department of Education. For the most part, vocational education programs are operated as part of the curriculum in comprehensive high schools. In Connecticut, Wisconsin, and Massachusetts, however, vocational education is provided only in separate vocational schools, and in many of the larger cities in other states such schools have been established.

Types of Program: The following types of program are included in vocational education:

A. Trade and Industrial (T & I)

The major objective of trade and industrial education is to provide instruction of a preparatory type in the development of basic manipulative skills, safety judgment, technical knowledge, and related industrial information for the purpose of fitting persons for useful employment in trades and industrial pursuits.

This objective is attained through various types of program. Each program is specific in purpose and is designed to serve the training needs of individual industrial workers. Training programs may be organized to provide instruction in:

1. Any industrial pursuit, skilled or semiskilled trade, craft, or occupation which directly functions in the designing, producing, processing, assembling, maintaining, servicing, or repairing of any manufactured product.
2. Any service trade or occupation which is not classified as agricultural, business, professional, or homemaking.
3. Other occupations which are usually considered as technical and in which workers such as nurses, laboratory assistants, draftsmen, and technicians are employed.

T & I programs are generally limited to the last two years of high school. A student usually takes industrial arts courses before enrolling in a T & I program.

For an effective T & I program, a school must be large enough to support a full-time director. At least four different trades would have to be included—machine shop, woodwork shop, auto mechanics shop, and electrical shop. The requirements of such an operation have sometimes led to the development of area vocational programs in high schools. These programs include students from several school districts. The state usually pays the transportation cost.

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[*] This appendix is based upon material published by the Division of Vocational Education of the United States Office of Education (especially pamphlet No. 117, *Public Vocational Education Programs*) and upon interviews with staff members of the Division and of the American Vocational Association.

More important even than the size of the school are the type of community and the occupational setup within it. A T & I program is costly, and a school board generally is not interested unless the community can employ the graduates. An advisory committee composed of local businessmen, labor leaders, and community leaders is essential.

The Smith–Hughes Act prescribes a six-hour day for T & I pupils in grades eleven and twelve. Three are spent in the shop and three in general education subjects, including at least one subject each term related to the vocational program; e.g., mathematics, mechanical drawing, science.

B. Distributive Education

Distributive education programs prepare students for occupations followed by workers directly engaged in merchandising activities, or in contact with buyers and sellers when:

1. Distributing to consumers, retailers, jobbers, wholesalers, and others the products of farm and industry, or selling services.
2. Managing, operating, or conducting a retail, wholesale, or service business.

This program is often called the work experience program. During the eleventh and twelfth grades, pupils work on a regular job no less than fifteen hours per week for which they receive remuneration.

As in the other programs, one course each term must be devoted to a related subject.

C. Home Economics

The controlling purpose of vocational education is "to fit for useful employment"; hence it follows that the controlling purpose of vocational education in home economics, as provided for by the vocational education acts, is to prepare for the responsibilities and activities involved in homemaking and in achieving family well-being. The general objective of vocational education in home economics is to provide instruction which will enable families to improve the quality of their family life through the more efficient development and utilization of human and material resources. Vocational programs, therefore, need to provide for instruction in all of the aspects of home living and homemaking. A student is enrolled throughout her high school career.

D. Agriculture

The purpose of vocational education in agriculture is to increase proficiency in farming. Students are enrolled in vocational agriculture programs throughout their high school course. For at least six months of the year, students must have access to farms where they are permitted full responsibility for carrying out programs under a teacher's guidance. In actual practice, most of these programs are carried out on a year-round basis, the students working on them on Saturdays and in the afternoons after school. Students must also take one course related to the program as a regular part of their academic schedule.

Vocational agriculture also includes, as an extracurricular activity, training in the civic and professional aspects of a farmer's life. The Future Farmers of America (F.F.A.) is open to any boy in the program. The F.F.A. tries to provide experience in leadership (public speaking, etc.) and in management (running a cooperative, etc.).

E. Practical Nursing

This program operates as a section in a trade and industrial program.

F. Fishing (Commercial)

This new program is divided between the trade and industrial and the distributive education programs. For the most part, it is being set up for adults and not at the high school level.

Comments: In the first place, anything that is said or written on the subject of vocational education must be considered in connection with the state in which the high school is located. As noted above, the administration of the federally aided vocational programs varies from state to state.

My inclination is strongly in favor of including vocational work in a comprehensive high school instead of providing it in a separate high school. My reasons are largely social rather than educational. I believe it is important for the future of American democracy to have as close a relationship as possible in high school between the future professional man, the future craftsman, the future manager of industry, the future labor leader, the future salesman, and the future engineer. As I have often stressed in my writings and earlier in this report, I am convinced that one of the fundamental doctrines of American society is equality of status in all forms of honest labor as well as equality of opportunity.

To my mind, it is desirable for as many boys and girls in high school as possible to have an ultimate vocational goal. It may well be that many of them will change their minds before the high school course is over or in later years. But, if a student thinks that what he or she is studying in school is likely to have significance in later life, the study in question takes on a new importance. There is less tendency for such "committed" students to waste their time or have a negative attitude toward their schoolwork.

Analysis of Enrollments: The following table (Table F1) presents data pertaining to vocational education in twenty-one states. The students who are included in this tabulation may be enrolled either in a comprehensive high school or a separate vocational school.

It is interesting to note the wide variations in the percentage of the youth enrolled in vocational courses supported by federal money. It will be evident that the percentage of the boys taking nonagricultural vocational work at the high school level varies by fivefold between Ohio (7.3 per cent) and Delaware (36.1 per cent). The percentage enrolled in vocational agriculture programs varies even more: the minimum is in Connecticut (1.5 per cent); the maximum (26.1 per cent), in Texas. These variations would seem to be correlated with the extent to which agriculture is important in the economy of the state. The variations in the percentage in the trade and industrial and the distributive education programs, however, would seem to reflect decisions of educational authorities, for there seems no obvious correlation between the figures and the degree of industrialization of the state.

Far more significant data would be supplied by the breakdown of these figures school by school. This information, however, appears not to be available in a compiled form.

TABLE F1: *Analysis of the Enrollment in Federally Supported Vocational Education Programs in High Schools in Certain States*

	No. of High Schs.	(1)Enrol., grades 9–12	(2)Enrol., Voc. Ag. (male)	Per Cent of Males Voc. Ag.	(1)Enrol., grades 11 & 12	(3)Enrol., T. & I. (male)	(4)Enrol., D. E. (male)	Per Cent of 11th- and 12th-grade males, T. & I. and D. E.
California	481	452,076	13,373	5.9	184,589	17,382	604	19.5
Connecticut	100	69,108	533	1.5	29,395	4,719	51	32.5
Delaware	34	12,365	890	14.4	5,148	822	107	36.1
Illinois	693	319,580	16,754	10.5	140,756	6,072	535	9.4
Indiana	824	185,551	12,476	13.4	77,719	3,582	233	9.8
Iowa	745	123,477	11,728	19.0	55,401	2,187	158	8.5
Kansas	636	93,531	6,652	14.2	41,622	1,506	139	7.9
Maryland	147	84,640	3,249	7.7	33,464	5,341	143	32.8
Massachusetts	242	169,734	1,335	1.6	73,896	13,806	180	37.9
Michigan	512	265,355	12,421	9.4	116,269	7,206	1,211	14.5
Minnesota	519	138,570	12,901	18.6	61,729	3,299	195	11.3
Missouri	555	154,815	11,733	15.2	65,604	3,705	1,016	14.4
New Jersey	170	170,589	1,563	1.8	72,270	4,242	123	12.1
New York	968	526,483	4,484	1.7	221,759	25,272	1,482	24.1
Ohio	958	328,570	11,432	7.0	137,151	4,691	325	7.3
Oregon	224	75,819	3,889	10.3	32,258	1,684	232	11.9
Pennsylvania	822	430,530	11,916	5.5	182,802	17,397	514	19.6
Rhode Island	29	20,608	347	3.4	8,908	1,265	—	28.4
Texas	1,198	335,404	43,781	26.1	136,102	7,998	2,790	15.9
Washington	291	106,868	7,919	14.8	46,132	4,730	279	21.7
Wisconsin	420	149,570	16,615	22.2	67,433	2,592	—	7.7

	(5)Enrol., Home Ec. (male)	Total Voc. Enrol. (male)	(5)Enrol., Home Ec. (female)	Per Cent in Home Ec. (female)	(3)Enrol., T. & I. (female)	(4)Enrol., D. E. (female)	Per Cent of 11th- and 12th-grade in T. & I. and D. E. (female)	Per Cent in Voc. Programs (excluding Home Ec.) (male)	Per Cent in Voc. Programs (female)
California	1,085	32,444	38,820	17.2	5,138	568	6.2	25.4	23.4
Connecticut	264	5,565	3,537	10.2	627	94	4.9	34.0	15.1
Delaware	—	1,819	2,673	43.2	181	98	10.8	50.5	54.0
Illinois	1,125	24,486	34,851	21.8	1,229	626	2.6	19.9	41.7
Indiana	531	16,822	29,277	31.6	261	246	1.3	23.2	32.9
Iowa	164	14,237	14,754	23.9	238	212	1.8	27.5	25.7
Kansas	451	8,748	10,443	22.3	60	159	1.1	22.1	23.4
Maryland	1	8,734	2,951	7.0	1,277	315	9.5	40.5	16.5
Massachusetts	—	15,321	2,461	2.9	1,371	158	4.1	39.5	7.0
Michigan	1,651	22,489	30,114	22.7	1,684	1,247	5.0	23.9	29.7
Minnesota	265	16,660	16,899	23.4	853	221	3.5	29.9	26.9
Missouri	336	16,790	18,156	23.5	1,217	627	5.6	29.6	29.1
New Jersey	586	6,514	1,797	2.1	346	123	1.3	13.9	3.4
New York	—	31,238	13,367	5.1	8,670	1,944	9.6	25.8	14.7
Ohio	—	16,448	15,428	9.4	1,535	539	3.0	14.3	12.4
Oregon	—	5,805	5,715	15.1	431	321	4.7	22.2	19.8
Pennsylvania	74	29,901	15,414	7.2	3,061	730	4.1	25.1	11.3
Rhode Island	—	1,612	1,368	13.3	109	—	2.4	31.8	15.7
Texas	2,809	57,378	80,572	48.0	3,156	2,313	8.0	42.0	56.0
Washington	826	13,754	22,842	42.7	1,542	395	8.4	36.5	51.1
Wisconsin	71	19,278	12,176	16.3	565	—	1.7	29.9	18.0

(1) Enrollment, by grade, in full-time public secondary schools. 1953–54 *Biennial Report*, U.S. Office of Education. The total figure is divided on a 50-50 basis for boys and girls.

(2) Enrollment in all-day Vocational Agriculture classes, fiscal year, 1956. *Digest of Annual Reports of State Boards for Vocational Education*, U.S. Office of Education.

(3) Enrollment in all-day and part-time Cooperative (Diversified Occupations) Vocational Trade and Industrial Classes, fiscal year, 1956. *Ibid.*

(4) Enrollment in part-time Cooperative Vocational Distributive Occupations (Distributive Education) Classes, fiscal year, 1956. *Ibid.*

(5) Enrollment in all-day Vocational Home Economics Classes, fiscal year, 1956. *Ibid.*

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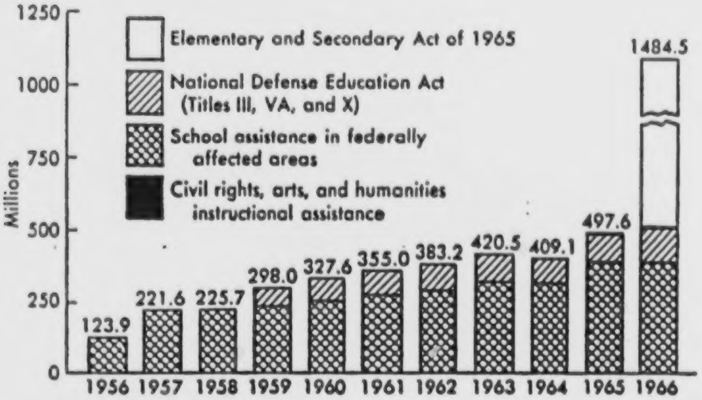
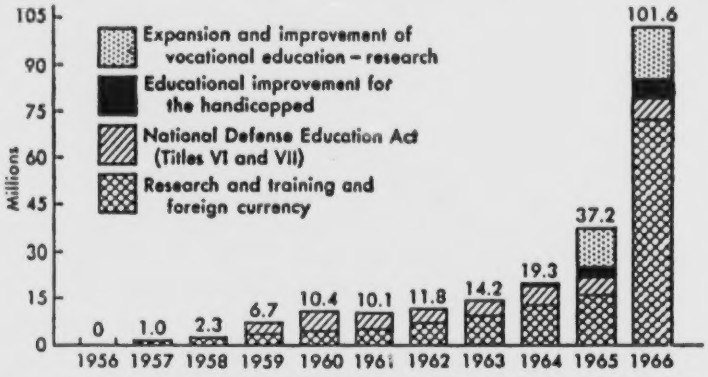
Chart 6. Office of Educational financial assistance for elementary and secondary education*



* Other than vocational education

SOURCE: Budget Office, Office of Education of the U.S. Department of Health, Education, and Welfare.

Chart 9. Office of Education financial assistance for educational research



SOURCE: Office of Education of the U.S. Department of Health, Education, and Welfare.

Keppel, Francis. The Necessary Revolution in American Education, 1966.

Table 12. Chronology of major education legislation passed by the 88th Congress and the first session of the 89th Congress

	Public law number	Title of law	Date signed by President
1.	88–129	Health Professions Educational Assistance Act of 1963	9/24/63
2.	88–164	Education Provisions (Title III), Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963	10/31/63
3.	88–204	Higher Education Facilities Act of 1963	12/16/63
4.	88–210	Vocational Education Act of 1963	12/18/63
5.	88–214	Manpower Development and Training Act, Amendments of 1963	12/19/63
6.	88–269	Library Services and Construction Act of 1964	2/11/64
7.	88–352	Civil Rights Act of 1964: Titles IV and VI	7/2/64
8.	88–368	Juvenile Delinquency and Youth Offenses Contract Act, Amendments of 1964	7/9/64
9.	88–452	Economic Opportunity Act of 1964	8/20/64
10.	88–579	National Arts and Cultural Development Act of 1964	9/3/64
11.	88–581	Nurse Training Act of 1964	9/4/64
12.	88–665	National Defense Education Act, Amendments of 1964; and School Assistance to Federally Affected Areas, Amendments of 1964	10/16/64
13.	89–10	Elementary and Secondary Education Act of 1965	4/11/65
14.	89–15	Manpower Development and Training Act, Amendments of 1965	4/26/65
15.	89–36	National Technical Institute for the Deaf Act	6/8/65
16.	89–69	Juvenile Delinquency and Youth Offenses Control Act, Amendments of 1965	7/8/65
17.	89–105	Training Teachers of the Handicapped, Amendments to P.L. 88–164	8/4/65
18.	89–209	National Foundation on the Arts and the Humanities Act of 1965	9/29/65
19.	89–253	Economic Opportunity Act, Amendments of 1965	10/9/65
20.	89–258	Captioned Films for the Deaf, Amendments of 1965	10/19/65
21.	89–287	National Vocational Student Loan Insurance Act of 1965	10/22/65
22.	89–290	Health Professions Educational Assistance Act, Amendments of 1965	10/22/65
23.	89–291	Medical Library Assistance Act of 1965	10/22/65
24.	89–313	Disaster Relief for Schools	11/1/65
25.	89–329	Higher Education Act of 1965	11/8/65

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Mager, Robert F. and Kenneth M. Beach, Jr.
Developing Vocational Instruction, 1967.

TABLE 1

Major Occupational Groups as a Percentage of Total Labor Force, Representative Years

Occupational Group	1900*	1947†	1960‡	1975‡
White-collar workers	*17.6*	*34.9*	*43.1*	*47.8*
Professional and technical	4.3	6.6	11.2	14.2
Managers and proprietors	5.8	10.0	10.6	10.7
Clerical workers	3.0	12.4	14.7	16.2
Sales personnel	4.5	5.9	6.6	6.7
Blue-collar workers	*35.8*	*40.7*	*36.3*	*33.4*
Craftsmen and foremen	10.5	13.4	12.8	12.8
Semiskilled operatives	12.8	21.2	18.0	16.3
Laborers (exclusive of farm and mine)	12.5	6.1	5.5	4.3
Service workers	*9.0*	*10.4*	*12.5*	*14.3*
Farm workers	*37.6*	*14.0*	*8.1*	*4.5*

* Computed from U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1957* (Washington: Government Printing Office, 1960), pp. 75–78.

† *Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization, and Training by the United States Department of Labor, Transmitted to the Congress, March 1963* (Washington: Government Printing Office, 1963), p. 143.

‡ *Ibid.*, p. 100. Figures for 1975 are projected.

TABLE 5

*Percentage Change in Employment, by Major Occupational Groups, 1960-75**

Occupational Group	*Percentage Increase, 1960 to Projected 1975*
Professional and technical	65
Managers and proprietors	32
Clerical workers	45
Service workers	51
Sales workers	34
Skilled workers	30
Semiskilled operatives	18
Laborers (exclusive of farm and mine)	—
Farm workers	−28

* *Manpower Report of the President and A Report on Manpower....*, p. 100.

Venn, Grant. Man, Education, and Work. 1964.

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Number of Institutions Offering NDEA Title VIII Programs, by Type, 1959–62

Institution	1959	1960	1961	1962
Comprehensive high school........	73	153	168	193
Vocational-technical high school...	..	44	66	125
Technical high school.............	14	17	49	43
Vocational or trade school.........	86	126	106	74
Technical institute................	17	52	25	27
Community or junior college.......	38	119	126	129
Four-year college.................	10	16	17	26
State schools.....................	20	2	13	13
Other...........................	4	8	..	..

Source: Division of Vocational and Technical Education, U.S. Office of Education, *Progress in Title VIII Programs, Fiscal Year 1962* (Mimeographed; Washington: The Office, March 1963), p. 2. The 1962 figures are provisional, subject to final audit of state reports.

Enrollment in Area Vocational Education Programs, by Type of Class, 1959–63

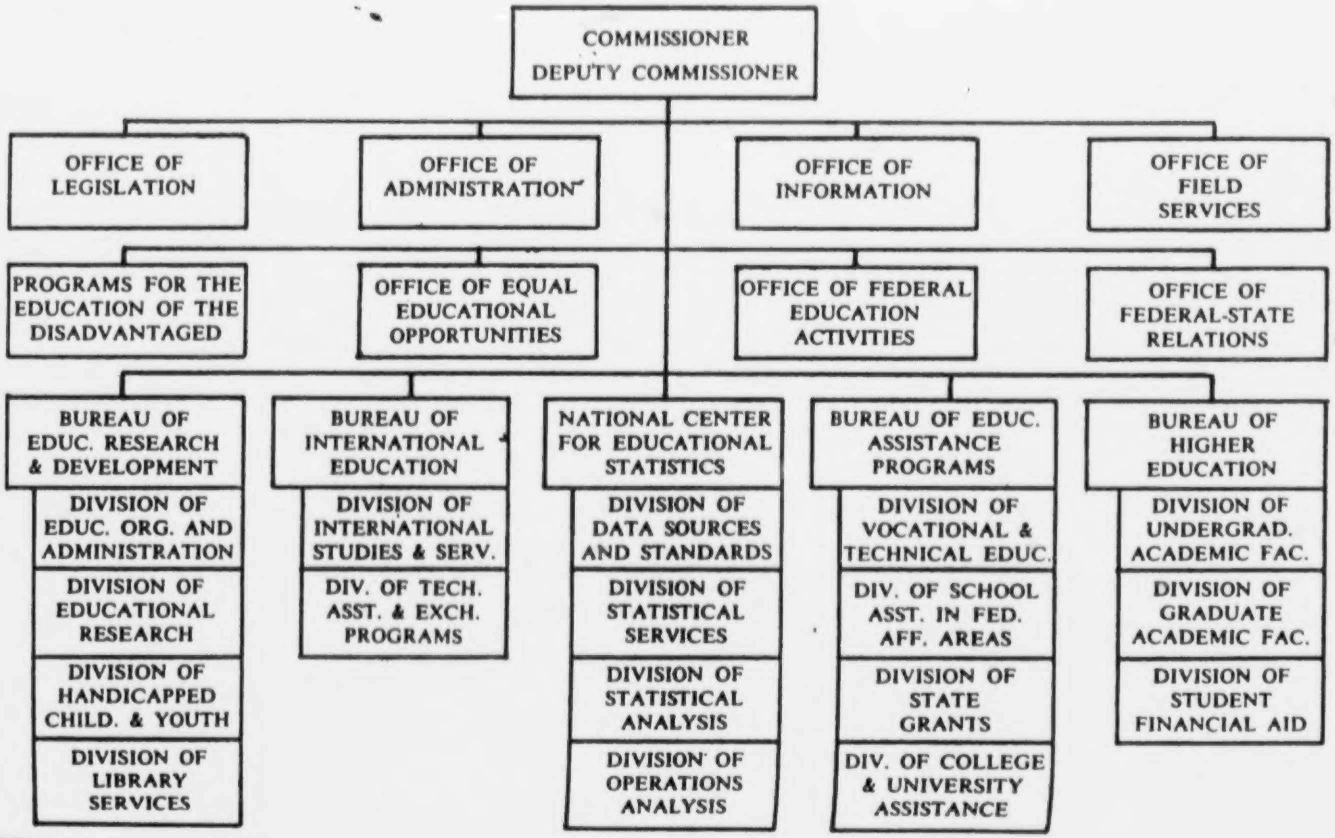
(in thousands)

Year	Total	Preparatory Classes		Extension Classes
		High School	Postsecondary	
1963............	168	15	50	103
1962............	149	13	40	96
1961............	123	12	27	84
1960............	101	7	26	68
1959............	49	(N.A.)	19	29

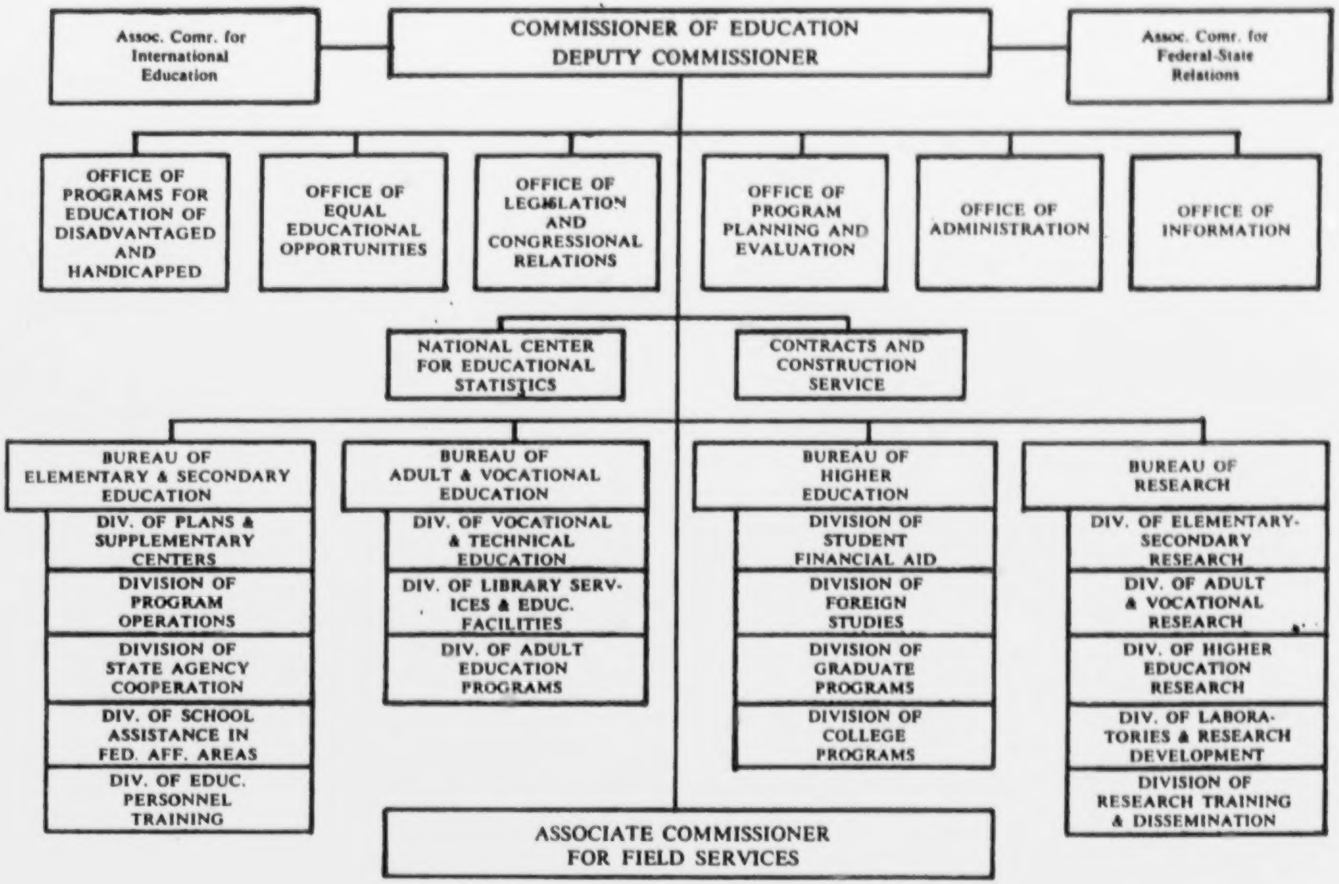
Source: *Progress in Title VIII Programs, Fiscal Year 1962*, p. 1. Figures for 1963 are estimated. Figures may not add to totals because of rounding.

Bailey, Stephen K. ESEA The Office of Education Administers a Law, 1968.

Organization Chart, United States Office of Education
January 14, 1965 (before reorganization)


COMMISSIONER DEPUTY COMMISSIONER
OFFICE OF LEGISLATION
OFFICE OF ADMINISTRATION
OFFICE OF INFORMATION
OFFICE OF FIELD SERVICES
PROGRAMS FOR THE EDUCATION OF THE DISADVANTAGED
OFFICE OF EQUAL EDUCATIONAL OPPORTUNITIES
OFFICE OF FEDERAL EDUCATION ACTIVITIES
OFFICE OF FEDERAL-STATE RELATIONS
BUREAU OF EDUC. RESEARCH & DEVELOPMENT
DIVISION OF EDUC. ORG. AND ADMINISTRATION
DIVISION OF EDUCATIONAL RESEARCH
DIVISION OF HANDICAPPED CHILD. & YOUTH
DIVISION OF LIBRARY SERVICES
BUREAU OF INTERNATIONAL EDUCATION
DIVISION OF INTERNATIONAL STUDIES & SERV.
DIV. OF TECH. ASST. & EXCH. PROGRAMS
NATIONAL CENTER FOR EDUCATIONAL STATISTICS
DIVISION OF DATA SOURCES AND STANDARDS
DIVISION OF STATISTICAL SERVICES
DIVISION OF STATISTICAL ANALYSIS
DIVISION OF OPERATIONS ANALYSIS
BUREAU OF EDUC. ASSISTANCE PROGRAMS
DIVISION OF VOCATIONAL & TECHNICAL EDUC.
DIV. OF SCHOOL ASST. IN FED. AFF. AREAS
DIVISION OF STATE GRANTS
DIV. OF COLLEGE & UNIVERSITY ASSISTANCE
BUREAU OF HIGHER EDUCATION
DIVISION OF UNDERGRAD. ACADEMIC FAC.
DIVISION OF GRADUATE ACADEMIC FAC.
DIVISION OF STUDENT FINANCIAL AID

Organization Chart, United States Office of Education
July 1, 1965 (after reorganization)


Assoc. Comr. for International Education
COMMISSIONER OF EDUCATION
DEPUTY COMMISSIONER
Assoc. Comr. for Federal-State Relations
OFFICE OF PROGRAMS FOR EDUCATION OF DISADVANTAGED AND HANDICAPPED
OFFICE OF EQUAL EDUCATIONAL OPPORTUNITIES
OFFICE OF LEGISLATION AND CONGRESSIONAL RELATIONS
OFFICE OF PROGRAM PLANNING AND EVALUATION
OFFICE OF ADMINISTRATION
OFFICE OF INFORMATION
NATIONAL CENTER FOR EDUCATIONAL STATISTICS
CONTRACTS AND CONSTRUCTION SERVICE
BUREAU OF ELEMENTARY & SECONDARY EDUCATION
DIV. OF PLANS & SUPPLEMENTARY CENTERS
DIVISION OF PROGRAM OPERATIONS
DIVISION OF STATE AGENCY COOPERATION
DIV. OF SCHOOL ASSISTANCE IN FED. AFF. AREAS
DIV. OF EDUC. PERSONNEL TRAINING
BUREAU OF ADULT & VOCATIONAL EDUCATION
DIV. OF VOCATIONAL & TECHNICAL EDUCATION
DIV. OF LIBRARY SERVICES & EDUC. FACILITIES
DIV. OF ADULT EDUCATION PROGRAMS
BUREAU OF HIGHER EDUCATION
DIVISION OF STUDENT FINANCIAL AID
DIVISION OF FOREIGN STUDIES
DIVISION OF GRADUATE PROGRAMS
DIVISION OF COLLEGE PROGRAMS
BUREAU OF RESEARCH
DIV. OF ELEMENTARY-SECONDARY RESEARCH
DIV. OF ADULT & VOCATIONAL RESEARCH
DIV. OF HIGHER EDUCATION RESEARCH
DIV. OF LABORATORIES & RESEARCH DEVELOPMENT
DIVISION OF RESEARCH TRAINING & DISSEMINATION
ASSOCIATE COMMISSIONER FOR FIELD SERVICES

EMERGENCE OF VOCATIONAL, TECHNICAL, OCCUPATIONAL EDUCATION IN AMERICA

THE EMERGENCE OF THE TECHNICAL SOCIETY

By

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A seminar paper presented to Nova University in
partial fulfillment of the requirements for the
degree of Doctor of Education

Nova University

June 19, 1991

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  Illustrative Case Studies of Skill Change

  Trends of Secondary Vocational Education

  The Impact of Change

Review of Literature

Three studies were reviewed: Toward the Year 2000: Work in Progress (1968) sponsored by the American Academy of Arts and Sciences and chaired by Daniel Bell; Work, Organizations, and Technological Change (1982) sponsored by NATO Scientific Affairs Division edited by Mensch and Niehaus; and The Impact of Technological Change on Employment and Economic Growth (1988) sponsored by the National Academy of Sciences edited by Cyert and Mowery.

All three agreed that the human factors involved in forecasting the future are most important; there are no absolutes when looking to the future; prediction of technological development is impossible; a relationship exists between social change and technological change; and all people will face problems as social and technological progress evolves.

Several well-known authors also considered the above points. For example, Drucker (1986), Naisbitt (1982) and Toffler (1980) discussed the struggle between those who want to preserve the industrial society and those who want to move into the information era. Unfortunately, many people are involved in both--counterbalancing high tech/high touch. Etzioni (1966) stated that change to any part of the system will cause changes in the overall system. Cetron (1982), Drucker (1965) and Toffler (1980) related the struggle among race, class, and ideology is greater because of the economic turbulence caused by the shift to the information society.

Education was also given a position of importance as the changes take place--each of the three studies emphasized the need for people to renew and update their knowledge and skills. Drucker (1989), Naisbitt (1982) and Toffler (1970 and 1980) supported the concept of renewed education for a lifetime. All agreed that educators must teach children to accept and live with change and become adaptable to their environment, workplace, and lifestyle.

The 1982 and 1988 studies discussed the shift in the economic structure as technology and society move into the information era. Both realized that technology is a resource but felt that it should be developed as part of a system--one which involves the individual, organizations, and society. In 1985 and 1989, Drucker discussed the use of a systems approach in management and in education. Executives must be able to organize/systematize innovation and people if companies are to be productive. Since schools provide an organized, systematic learning environment, students should become effective managers and/or employees in the information society. However, fear seems to be widespread in the workplace. Ryan and Oestreich (1991) viewed fear as a barrier to productivity, quality, and innovation.

The information reviewed examined human resource development from three viewpoints: individual, corporate, and educational. Cyert (1988) also discussed the role of the military in predicting the skill impact of the new technologies on the workplace.

Implications

Although education has been a national priority since 1958, it seems that society and social change are the very influences which inhibit education from doing its job. Education relies on money from the local, state, and federal governments. However, educators need to take a stand and be ready to explain the basic needs of children and education.

As can be seen in the literature review, our society must look at the broad picture. Most people agree that education should reflect society; as the world becomes small because of technology, education needs to establish a core curriculum of general knowledge that all students should possess. As early as 1970, Toffler stated that performance improves when the individual knows what to expect. While it is impossible to predict the future, a part of the core curriculum should include a course on the future as it relates to people and technology. The core curriculum should also include the dignity of the individual and a respect for all work, regardless of the required training.

All studies indicate that approximately one-half of the nation's children will not receive training beyond high school. Some type of program should be developed so that these students develop a sense of self-esteem and societal responsibility in performing manual or service-related jobs in the information era. There may be a way in which vocational education could help these students.

The other fifty percent of the students should be taught to enjoy and encouraged to continue learning; they should examine the historical development of the information age. A portion of this group will be employed in the traditional professions requiring a college plus education. The other segment will become the technical professionals, individuals trained to provide support services for technology; for example, personnel to repair and maintain computers and robots, laboratory technicians, and support personnel (trained to perform a specific computer function).

The technical professional is the person who requires a vocational/technical program in high school. This person will also need additional college training as technology continues to change. The initial high school preparation should combine academic subjects with technical/occupational classes. While this person will be trained to work with his hands, he must understand that a specific sphere of knowledge is required before the job can be accomplished. In addition, society will have to realize that both the traditional professional and the new vocational/technical professional are both needed to compete in a global marketplace.

We have the knowledge, technology, and desire to solve our educational problems. One obstacle to their solution is fear--of the unknown, technology, and ourselves. Parental fears are sensed by the children. In an age when knowledge should set us free, it seems that people are afraid to give it a chance. Vocational education leaders and teachers have a great opportunity and challenge because the majority of students require a combination of academic and technical/ occupational skills. This is the purpose of vocational education.

REFERENCES

Bell, Daniel. Toward the Year 2000: Work in Progress. Boston, Massachusetts: Beacon Press, 1968.

Cetron, Marvin and Thomas O'Toole. Encounters with the Future: A Forecast of Life into the 21st Century. New York, New York: McGraw-Hill Book Company, 1982.

Cyert, Richard M. and David C. Mowery, eds. The Impact of Technological Change on Employment and Economic Growth. Cambridge, Massachusetts: Ballinger Publishing Company, 1988.

Drucker, Peter F. The New Realities. New York, New York: Harper & Row, Publishers, 1989.

Drucker, Peter F. The Frontiers of Management. New York, New York: E. P. Dutton, 1986.

Drucker, Peter F. Innovation and Entrepreneurship. New York, New York: Harper & Row, Publishers, 1985.

Drucker, Peter F. The Future of Industrial Man. New York, New York: The New American Library of World Literature, Inc., 1965.

Etzioni, Amitai. Studies in Social Change. New York, New York: Holt, Rinehart and Winston, Inc., 1966.

Mensch, Gerhard and Richard J. Niehaus. Work, Organizations, and Technological Change. New York, New York: Plenum Press, 1982.

Naisbitt, John and Patricia Aburdene. Megatrends 2000. New York, New York: William Morrow and Company, Inc., 1990.

Naisbitt, John. Megatrends. New York, New York: Warner Books, Inc., 1982.

Pautler, Albert J., Jr. Vocational Education in the 1990s: Major Issues. Ann Arbor, Michigan: Prakken Publications, Inc., 1990.

Ryan, Kathleen D. and Daniel K. Oestreich. Driving Fear Out of the Workplace. San Francisco, California: Jossey-Bass Publishers, 1991.

Toffler, Alvin. The Third Wave. New York, New York: William Morrow and Company, Inc., 1980.

Toffler, Alvin. Future Shock. New York, New York: Random House, 1970.

APPENDIX

Toward the Year 2000: Work in Progress
Daniel Bell, ed.,1968.

Members of the Commission on the Year 2000

Summer 1967

Daniel Bell, Chairman
William O. Baker
Harvey Brooks
Zbigniew Brzezinski
Karl W. Deutsch
Theodosius Dobzhansky
Hedley Donovan
Leonard J. Duhl
Dan Ellsberg
Erik H. Erikson
Robert M. Fano
Lawrence K. Frank
Stephen R. Graubard
Charles M. Haar
Stanley Hoffmann
Samuel P. Huntington
Fred Charles Iklé
Herman Kahn
Wassily Leontief
Ernst Mayr
Matthew S. Meselson
Wilbert E. Moore
Daniel P. Moynihan
Harold Orlans
Harvey S. Perloff
John R. Pierce
Emanuel R. Piore
Ithiel de Sola Pool
Gardner C. Quarton
Roger Revelle
David Riesman
Eugene V. Rostow
Donald A. Schon
Martin Shubik
Krister Stendahl
Robert C. Wood
Christopher Wright
Paul N. Ylvisaker

The Working Parties: Summer 1967

Values and Rights
The Life Cycle of the Indivual
The International System
The Structure of Government
Intellectual Institutions
Science and Society
The Social Impact of the Computer
Biomedical Sciences and Technology

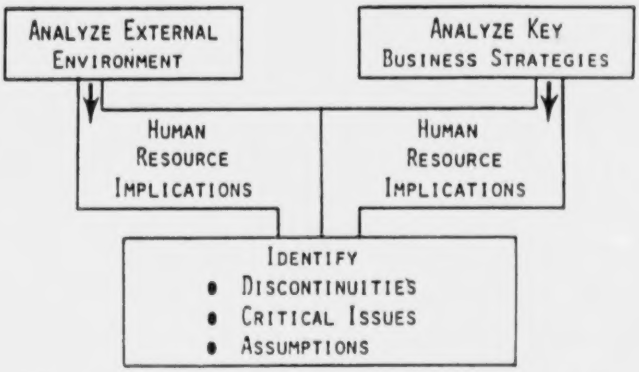
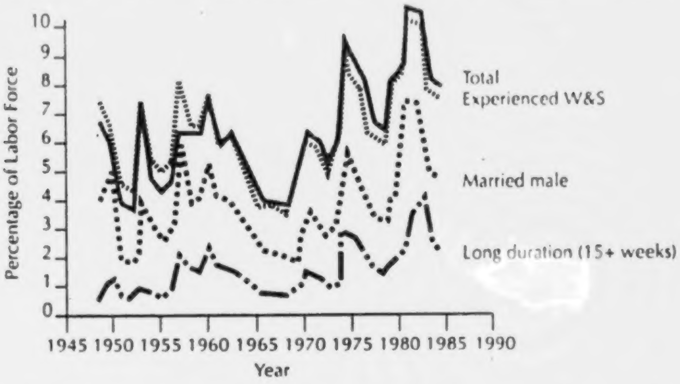

ANALYZE EXTERNAL ENVIRONMENT
ANALYZE KEY BUSINESS STRATEGIES
HUMAN RESOURCE IMPLICATIONS
HUMAN RESOURCE IMPLICATIONS
IDENTIFY
• DISCONTINUITIES
• CRITICAL ISSUES
• ASSUMPTIONS

Figure 1. The Human Resource Planning Process

Mensch, Gerhard and Richard J. Niehaus. Work, Organizations, and Technological Change. New York, New York: Plenum Press, 1982.

Figure 1-1. Selected Unemployment Rates, 1948-85.



Total: civilian labor force
Experienced W&S: experienced wage and salary workers
Married male: married males, spouse present
Long duration: long duration unemployment (15+ weeks) as percentage of civilian labor force

Cyert, Richard M. and David C. Mowery. The Impact of Technological Change on Employment and Economic Growth. Cambridge, Massachusetts: Ballinger Publishing Company, 1988.

Cyert, Richard M. and David C. Mowery. The Impact of Technological Change on Employment and Economic Growth. Cambridge, Mass.: Ballinger Pub. Co., 1988.

Table 4–1. Summary of Aggregate Studies of the Effects of Technology on Skill Requirements that Employ Direct Measures of Skill.

Study	*Sample/ Population*	*Time Period*	*Content/ Composition Shift*	*Skill Measures*	*Outcomes*	*Notes—Design Threats*
Horowitz and Herrnstadt (1966)	All Department of Transportation (DOT) jobs in five industries (slaughter and meat packing, rubber tires and tubes, machine shop trades, medical services, banking)	1949–1965	Content	For jobs; 25 DOT indicators; most indicators reflect skill as substantive complexity; two or three indicators may approximate skill as autonomy-control	Mixture of upgrading and downgrading; little net change	Limited to five industries; depends on independence of DOT editions
Spenner (1979)	5 percent sample of fourth edition DOT titles (N=622) matched to third edition titles	1965–1977	Content	For jobs; DOT indicators for data, people and things; skill as substantive complexity	Small upgrading; little net change	Depends on independence of DOT editions
Berg (1970)	1950–1960 decennial census distributions; 4000 DOT jobs rated in 1956 and 1965	1950–1960 (1956–1965)	Composition and content	For jobs; DOT General Educational Development (GED) indicator; skill as substantive complexity	Small compositional upgrading; for content, 54 percent of jobs had the same GED, 31 percent were higher and 15 percent were lower; apparent content upgrading	Depends on independence of editions; possible validity problems with GED; change in GED categories between editions may overestimate upgrading
Berg, Freedman, and Freeman (1978)	1950–1970 decennial census distributions; second edition DOT estimates for 1950; third edition estimates for 1960 and 1970	1950–1970 (1956–1965)	Composition and content	For jobs; DOT GED indicator; skill as substantive complexity	Same as Berg (1970) for 1950–1960; small compositional upgrading for 1960–1970	Same as Berg (1970)
Rumberger (1981)	1960 and 1976 census and Current Population Survey (CPS), respectively; employed population fourteen and older; third and fourth edition DOT	1960–1976 (1965–1977)	Composition and content	For jobs; DOT GED indicator; skill as substantive complexity	Modest compositional upgrading; small content upgrading but with some evidence of proletarianization as the number of very highest skill jobs declined	Depends on independence of DOT editions; possible validity problems with GED
Rumberger (1981: Table 4); also see, Eckaus (1964) and Rawlins and Ulman (1974)	See Rumberger above; 1940–1950 decennial census distributions	1940–1976	Composition	For jobs; DOT GED indicator; skill as substantive complexity	Overall 18 percent compositional upgrading over thirty-six years; greatest increase between 1950 and 1960	Depends on independence of DOT editions; possible validity problems with GED
Reanalysis of Dubnoff (1978) data; see Spenner (1982)	Decennial census distributions for all gainful workers (1900–1930) or all employed workers (1940–1970)	1900–1970	Composition	For jobs; DOT indicators for data, people, things, SVP, and combination of the first three indicators; skill as substantive complexity	Little net change; only one of eighteen skill-year or higher order effects significant in loglinear decomposition; for one interaction, evidence of skill polarization in recent	Depends on the quality of the map of detailed occupations from one census year to another; comparison assumes constant work content to third edition DOT scores

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Study	*Sample/ Population*	*Time Period*	*Content/ Composition Shift*	*Skill Measures*	*Outcomes*	*Notes—Design Threats*
Mueller et al. (1969)	National probability sample of 1967 labor force (N = 2662)	1962–1967 (retrospective measure of job and machine change over five years)	Content (composition inasmuch as 1967 sample members changed jobs)	For people; detailed reports of level and type of machinery use over five years; self-reports of "skill required" and "own influence in organizing the work"; mixture of skill as substantive complexity and skill as autonomy-control	For job changers over five years, modest upgrading in mechanization level and skill measures; for those who stayed in the same job but experienced machine change: More Same Less "Skill" 53% 36% 7% "Influence" 34% 54% 7% Across all respondents, small upgrading	For job changers, conflation of compositional upgrading with seniority-career effects; short time interval; validity-reliability of self-report and retrospective report data; compositional shift via demographic replacement ignored
Karasek, Schwartz, and Pieper (1982)	National samples for 1969, 1972, and 1977; adult employed labor force working twenty or more hours per week (N = 4531)	1969–1977	Content (composition partially adjusted for with demographic controls; otherwise assumed constant)	For people, aggregated to 240 occupation categories; four replicated questions combined into single scale (learn new things, "skill," creativity, and repetition); skill as substantive complexity	No change in skill discretion scale scores	Validity-reliability of self-reports; slightly different response categories in 1977 compared with 1969 and 1972
Wright and Singelman (1982)	Decennial census distributions for thirty-seven industry sectors; the design decomposes 1960–1970 shifts into industry, class, and interaction component; skill levels implicit in class categories	1960–1970	Composition (industry and class shifts)	For people; measured through class categories (self-employed, have employees, have subordinates, and level of freedom and decisionmaking in jobs); self-reports taken from 1969 National Survey of Working conditions; skill as autonomy-control	Overall small changes; mixed evidence for upgrading and downgrading in class and industry shifts; for upgrading more managers, for downgrading more workers; industry and class composition shifts tend to operate in opposite directions; some evidence for proletarianization in the class composition shift into the working class	Depends on the validity of class measurement; validity-reliability of self-report; possible skill heterogeneity in class and industry categories; assumes constant work content over the time interval; skill is measured indirectly in class categories
Sobel (1982)	National samples for 1970, 1973, 1976, and 1977; adult employed labor force working twenty or more hours per week	1970–1977	Composition and content	For people; related questions in successive surveys taken to measure supervisory status; skill as autonomy-control	Decline in skill; percent classified as supervisors: 1970 36.1% 1973 34.1% 1976 31.4% 1977 31.1%	Different sampling designs at the time points; nonidentical questions to measure supervisory status at the time points; validity-reliability of self-reports; indirect

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Table 4–2. Illustrative Case Studies of Skill Change.

Study	*Sample Population*	*Time Period*	*Content/ Composition Shift*	*Skill Measures/ Dimensions*	*General Outcomes*	*Notes*
Braverman (1974)	All work; concentration on operative, clerical, craft, and service occupations; some participant-observation in England	1900–1974 (also late nineteenth century)	Primarily content	Including: repetitiveness, responsibility, scope and variety of tasks, integration of mental, manipulative, and interpersonal task components; authority-supervision relations; skill as substantive complexity and autonomy-control; no direct skill measures	Overall deskilling; separation of conception and execution in work; polarization of jobs vis-a-vis skill requirements; growing mass of working class occupations	Sketchy coverage of composition shifts; unclear whether deskilling conclusions apply equally to all occupations or which fractions thereof
Bright (1958, 1966)	Highly automated manufacturing firms, principally auto engine assembly parts, machine shops, and metal working	1950s to mid-1960s	Primarily content	Twelve contributions of workers to tasks, including: physical and mental effort, manipulative and general skills, responsibility, and decisionmaking	Across seventeen defined levels of mechanization, have mixed effects, generally increasing skill requirements up to the middle levels of automation and decreasing thereafter	Sketchy coverage of composition shifts; applications to other areas and technology changes unclear; has been criticized for limited range of mechanization in studied plants and limited skill definition (Adler 1983)
Faunce (1958)	Random sample of workers from machinery departments of Detroit automobile engine plant (N = 125)	Mid-1950s	Content (Comparison of pre- and post-assembly line experiences)	Closeness of supervision, responsibility, control over work pace, attention, relationship with supervisor, interactions with coworkers	Deskilling in less control over work pace, more closely supervised, job requires more alertness and attention (could be interpreted as upgrading); upgrading in that the worker was responsible for a larger share of the production process; increased isolation from coworkers; altered relationship with supervisors	Validity-reliability of self-report; no consideration of composition shifts; short time span confounded with with newness of technology change
Stone (1974)	Steel industry; skilled craft and heavy laborers	1890–1920 (secondarily through 1960s)	Primarily content	Unclear; apparently includes training, experience, dexterity, judgment, and general knowledge of production process; skill as substantive complexity and autonomy-control; no direct skill measures	Substantial deskilling of focal jobs; technology not primary cause but an instrument in larger control process (i.e., employer control over wages and labor unrest)	Quality of time one (nineteenth century) skill levels in the steel industry unknown; no consideration of composition shifts

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Table 4–2. (*Continued*)

Study	*Sample Population*	*Time Period*	*Content/ Composition Shift*	*Skill Measures/ Dimensions*	*General Outcomes*	*Notes*
Kraft (1977)	Computer programmers (about 100 programmers interviewed, participant-observer study)	1940s–1970s	Primarily content	No explicit definition or direct measures; apparently includes span and cognitive complexity of task, discretion and control over work; skill as substantive complexity and autonomy-control	Deskilling; management strategy to simplify, routinize, and standardize programming task; accomplished through canned programs, structured programming and chief programmer teams; some small fraction of systems analyst and engineer positions are upgraded	Sketchy coverage of composition shifts; applies largely to programmers in large business firms (versus smaller firms, academic positions, and so on)
Glenn and Feldberg (1979)	Clerical work	1870–1880; principally twentieth century	Content and composition	No explicit definitions or direct measures; apparently includes task complexity and scope, control over work; skill as substantive complexity and autonomy-control	Progressive fragmentation, specialization, and routinization of clerical work roles; coupled with massive growth, substantial deskilling; upgrading for small number of systems analysts and supervisors	Quality of time one (nineteenth century) skill levels of clerical work unknown; study focuses most on secretary, typist, and stenographer, to the exclusion of other clerical roles
Burawoy (1979)	Engine division of Chicago-based multinational corporation, machine shop occupations; participant-observer study	1944 and 1974	Content	No explicit definitions or direct measures; apparently includes task scope and complexity, discretion, and autonomy in work role; skill as substantive complexity and autonomy-control but more as located in workers than job requirements	Larger changes in piece-rate and rate-fixing systems, bargaining relations, and redistribution of hierarchical conflict led to mixtures of upgrading and downgrading (i.e., more autonomy for a number of occupations); more important larger process involves the operations through which the factory social system contains struggles and manufactures consent	At times "skill" equated with experience and training; no consideration of compositional shifts; unclear how interactional dynamics in the labor process of this particular shop (given an important theoretical role) characterize other work settings
Wallace and Kalleberg (1982)	Printing industry occupations; principally compositors, machine operators, and linotypists	1931–1978	Content and composition as reflected in wage rates	Indirect measure: wage rates	Steady, substantial decline in printing industry-skilled–occupation wages *relative* to several comparison occupation groups; regression analyses indicate capital-intensity as the major proximate causal	Complex assumptions associated with indirect measure; change in wage rates may be due to factors other than skill change

Table 4–2. (*Continued*)

Study	*Sample Population*	*Time Period*	*Content/ Composition Shift*	*Skill Measures/ Dimensions*	*General Outcomes*	*Notes*
Hull, Friedman, and Rodgers (1982)	Printers for three largest New York newspapers in the sample at both time points (N = 408 for 1950; N = 245 for 1976)	1950 and 1976	Content	Printers self-reports of the *physical* and *intellectual* demands of new methods of printing; skills as substantive complexity	Percent of printers defining new methods of printing as More Same Less Physical demands 18% 24% 58% Intellectual demands 53% 21% 27% Overall, modest to strong upgrading in lowered physical and increased intellectual demands	Validity-reliability of self-reports; printers most subject to downgrading may not be in the sample in 1976
Adler (1983)	Clerical occupations in four largest French banks; observational study	1930s–early 1980s	Content	Same worker contributions as Bright (1958); some adjustment of dimensions for qualitative changes or new skills; skill as substantive complexity and autonomy-control; apparently no direct measures	As banks moved from lower to higher forms of automation, mixture of upgrading and downgrading effects; at highest level of automation, qualitative transformation of work so as to require new categories of skill: greater worker responsibility for production, more abstract tasks and greater interdependence of jobs; impact of technology substantially mediated by market factors, managerial strategies, and social definitions of skill requirements	No consideration of composition shifts; quality of time one skill levels in the banking industry unknown.
Kelley (1986)	Eleven studies that investigated introduction of numerical control technology; U.S., U.K., West German, and Japanese plants; twenty-two establishments, forty-one different blue-collar jobs	Primarily 1970s	Primarily content	Whether workers in affected blue-collar occupations (NC operations) perform any programming tasks; some mixture of skill as substantive complexity and autonomy-control	Mixture of upgrading, downgrading, and skill polarization that was largely establishment-specific; no evidence of singular managerial motives to deskill or upgrade; strong evidence of the role of managerial discretion and organizational variables (i.e., size); three managerial approaches: scientific management, technocratic, and worker-centered	Sketchy or no coverage of composition shifts; uneven skill measures; highly variable design quality in the eleven studies; involves cross-national comparisons; unclear whether there were direct time one and time two skill measures

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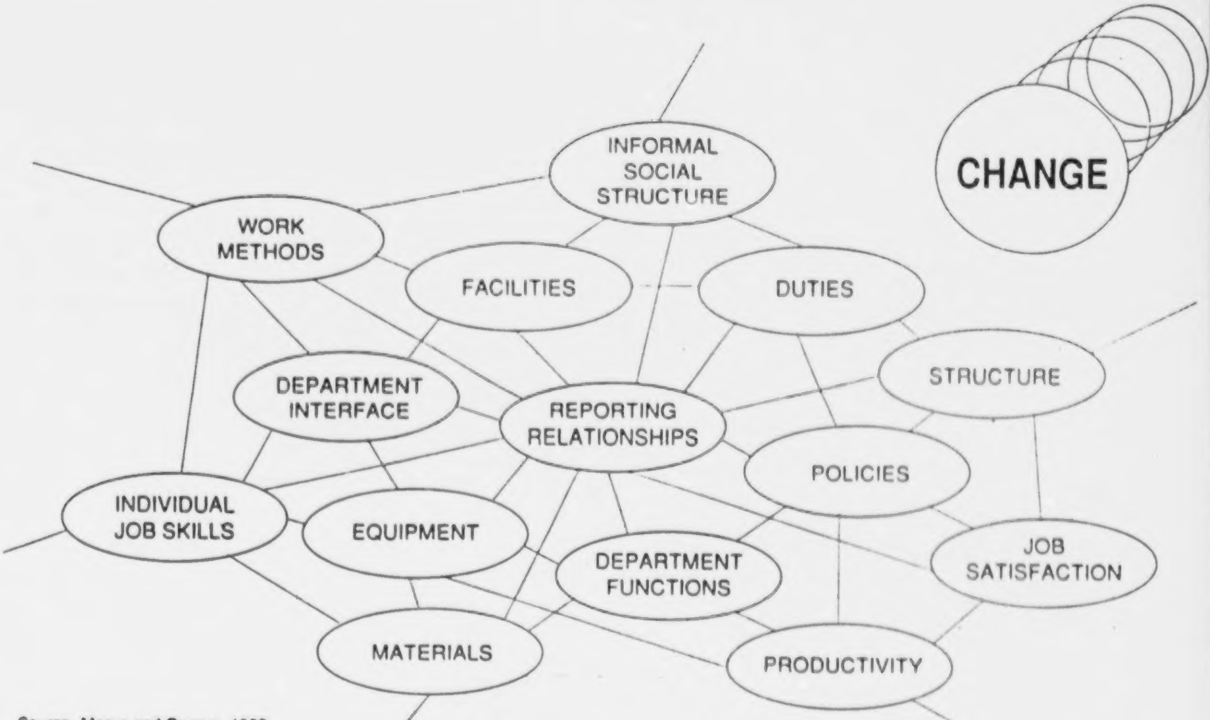
Table I

Trends of Secondary Vocational Education

PAST	PRESENT-FUTURE
Goals	
Job Preparation	Prepare for Postsecondary
Vocational Education	General & Technology Education
Separate Education	Combined With General Education
Work Force Needs	Societal Needs
Considerations	
Economic	Social & Political
Curriculum	
Use of Job Analysis	Conceptual
Specific	Generic
Psychomotor Development	Cognitive & Affective Development
Job Related	Basic Education
Medium Level Skills	Low Level Skills
Transferable Skills	Adaptability Skills
3 Hour Blocks	1 & 2 Hour Blocks
Out of School Experience	In-School Experience
Separate Programs	Clustered
Rigorous	Less Demanding
Real-World/Hands-on	Simulations/Observations
Shops/Laboratories	Classrooms

Pautler, Albert J., Jr. Vocational Education in the 1990s: Major Issues. Ann Arbor, Michigan: Prakken Publications, Inc., 1990.



Source. Moore and Gergen, 1985.

Figure 10. The Impact of Change

The above figure "explains the reasons why during times of change more people are likely to be affected by worst-case thinking. . . model shows how a change, . . . such as a layoff. . . can operate like a fast-moving, powerful object descending on a web of interconnected aspects of organizational life." (p. 219)

Ryan, Kathleen D. and Daniel K. Oestreich. Driving Fear Out of the Workplace. San Francisco, California: Jossey-Bass Publishers, 1991.

EMERGENCE OF VOCATIONAL, TECHNICAL, OCCUPATIONAL EDUCATION IN AMERICA

STUDIES ABOUT EDUCATION

By

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Review of Literature

Two studies were reviewed: *A Nation at Risk* (1983) conducted by The National Commission on Excellence in Education, David Pierpont Gardner, Chairman; and *The Reform of Secondary Education* (1973) conducted by The National Commission on the Reform of Secondary Education established by the Charles F. Kettering Foundation, B. Frank Brown, Chairman. Both studies supported life-long learning and emphasized teacher preparation. The studies and Hodgkinson (1985) noted the important interrelationship among all levels of education--elementary school affects the outcome in high school and high school affects college, etc.

The 1973 document presented a review of secondary reform movements in the United States. According to the study, the decline in student enrollment will mean a reduction in appropriations for schools and the mix of young people from differing social backgrounds will create problems. Thirty-two recommendations were broken down into ten different areas: national goals, components of secondary school reform, career education, global education, nonformal sources of education, impact of television on curriculum, alternative programs for secondary education, school security crisis, balance between students' rights and obligations, and sex stereotypes.

The 1983 study emphasized excellence on three levels: individual, school and society. The study stressed the need to create a life-long learning society and reform of the educational system through effective leadership. The study identified, defined, and discussed four aspects of the educational process: content, expectations, time, and teaching. The study made five recommendations to promote excellence in education. This was the first study to specifically mention incorporating the computer into the secondary curriculum.

Hodgkinson (1985) examined education from a demographics viewpoint. He predicted the educational system will be working with children who are poor, ethnically and linguistically diverse, and have handicaps that affect learning.

The 1983 and 1985 studies, Brandwein (1981), Bloom (1981), and Black (1982) accentuated the need to maintain high standards for all students. Brandwein (1981), Bloom (1981), and Black (1982) discussed the issues of quality and equality, and the social changes that prevent the schools from completing their primary job: educating children.

In 1980, Perkins chaired a subcommittee on elementary, secondary and vocational education; areas of concern: leadership and governance, social change and demographics, knowledge, technology, and curriculum. The report emphasized the need to educate students to accept change now and in the future.

There are many opinions on educational reform; for example, Finn (1984) promoted the humanities in education; Bowsher (1989) emphasized the need for transformational leadership and the development of a systems approach in education; and Schaefer (1990) feels that education has mixed academic and vocational courses without continuity or clarity.

Implications

Both studies reflect the historical period in which they were developed. The 1973 study reflects the concern of a nation which did not have a positive self-image. Technology was becoming part of everyday work life but had not impacted on the individual; television was becoming a means of educational attainment. The 1983 study reflects a nation that was developing pride and a renewed patriotic spirit--the message of the study was America can succeed if all people join in the historical spirit of unity.

In terms of vocational education, the 1973 commission understood the need to train students in both academic and vocational disciplines. Vocational teachers have the added value of real-world experience. The 1973 study viewed career education as the best method to meet the economic and social needs of minorities. Vocational education should be viewed as a part of academic training not a substitute for it. While the 1983 study is not as explicit with regard to vocational education, it does recommend a longer school day and school year. There has been a decline in vocational programs in many high schools in the State of Maryland because the updated requirements in secondary education eliminated the time for vocational courses.

Vocational/technical education is usually not promoted by the guidance counselors in high schools. Most counselors do not understand the change demands required in moving from the industrial to the information era (change was also required when the nation moved from the agricultural to industrial era).

The emphasis placed on television in the 1973 study was an indicator of combining the products of the information age with the education system. In many ways this was the beginning of distance learning. The 1983 study emphasized the impact of the computer. This is a definite vocational/ technical implication for the future.

If teachers could learn to share and accept each respective discipline as an important contribution to the educational system, the problems in education could be reduced. Education has to be a combination of many disciplines coming together for the benefit of the student.

It has only been in the last two years that education has become a media goal. The mass media has suddenly discovered a new toy; each night you view the worst and the best about the educational system. Unfortunately, the media rarely discusses the average, middle of the road student. It does a very nice job of presenting problems and statistics, but it does not present solutions.

For the most part, the readings indicate that all educational reforms reiterate some educational basics--reading, writing, and arithmetic are essential--and each reform study mentions several topics which reflect the views of society at the time the study is written. Education is like the pendulum on a clock--it swings back and forth and each swing has both positive and negative implications.

REFERENCES

A Nation at Risk. Washington, D.C.: U.S. Government Printing Office, 1983.

Black, Theodore M. Straight Talk about American Education. New York, New York: Harcourt Brace Jovanovich, Publishers, 1982.

Bloom, Benjamin S. All Our Children Learning. New York, New York: McGraw-Hill Book Company, 1981.

Bowsher, Jack E. Educating America. New York, New York: John Wiley & Sons, Inc., 1989.

Brandwein, Paul F. Memorandum: On Renewing Schooling and Education. New York, New York: Harcourt Brace Jovanovich, Publishers, 1981.

Brown, B. Frank, ed. The Reform of Secondary Education. New York, New York: McGraw-Hill Book Company, 1973.

Finn, Chester E., Jr., Diane Ravitch, and Robert T. Fancher, eds. Against Mediocrity. New York, New York: Holmes and Meier Publishers, Inc., 1984.

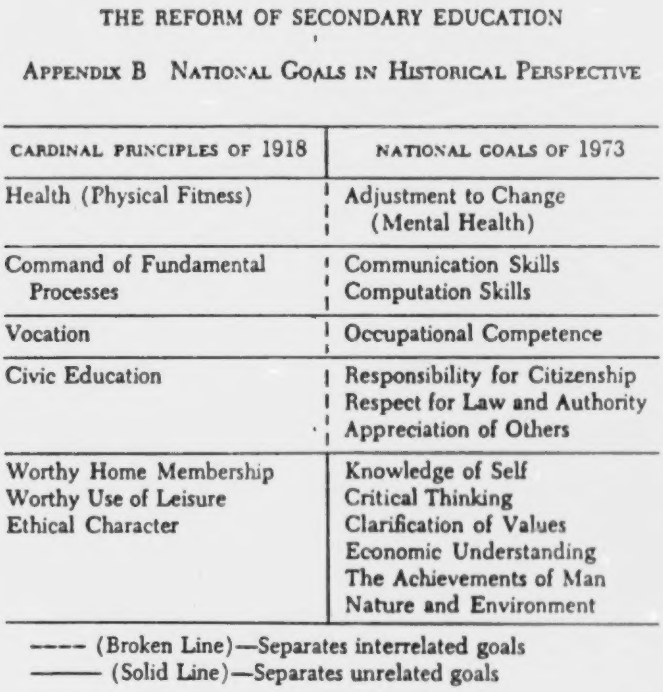
Grambs, Jean D. and John C. Carr. Modern Methods in Secondary Education. Fort Worth, Texas: Holt, Rinehart and Winston, Inc., 1986.

Hodgkinson, Harold L. All One System. Washington, D.C.: Institute for Educational Leadership, 1985.

Perkins, Carl D., Chairman. Needs of Elementary and Secondary Education in the 1980s. Washington, D.C.: U.S. Government Printing Office, 1980.

Schaefer, William D. Education Without Compromise. San Francisco, California: Jossey-Bass Publishers, 1990.

APPENDIX



THE REFORM OF SECONDARY EDUCATION

APPENDIX B NATIONAL GOALS IN HISTORICAL PERSPECTIVE

CARDINAL PRINCIPLES OF 1918	NATIONAL GOALS OF 1973
Health (Physical Fitness)	Adjustment to Change (Mental Health)
Command of Fundamental Processes	Communication Skills Computation Skills
Vocation	Occupational Competence
Civic Education	Responsibility for Citizenship Respect for Law and Authority Appreciation of Others
Worthy Home Membership Worthy Use of Leisure Ethical Character	Knowledge of Self Critical Thinking Clarification of Values Economic Understanding The Achievements of Man Nature and Environment

---- (Broken Line)—Separates interrelated goals
——— (Solid Line)—Separates unrelated goals

Brown, B. Frank, Chairman. The Reform of Secondary Education. New York, New York: McGraw-Hill Book Company, 1973.

NATIONAL COMMISSION ON THE REFORM OF SECONDARY EDUCATION

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THE REFORM OF SECONDARY EDUCATION

B. Frank Brown, Chairman

Recommendation No.	
	NATIONAL GOALS OF EDUCATION
1	Defining Secondary School Expectations
2	Community Participation in Determining Secondary School Expectations
	EMERGING COMPONENTS OF SECONDARY SCHOOL REFORM
3	The Basis for Curricular Revision
4	Teacher Training
5	Bias in Textbooks
6	Bias in Counseling
7	Affirmative Action
	CAREER EDUCATION AS PART OF THE CURRICULUM
8	Expanding Career Opportunities
9	Career Education
10	Job Placement
	GLOBAL EDUCATION AS PART OF THE CURRICULUM
11	Global Education
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12	Alternative Paths to High School Completion
13	Local Board Responsibilities for Funding Alternatives
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16	Broadcast Television
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21	Planning for School Security
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Members of the National Commission on Excellence in Education

A Nation at Risk
Washington, D.C.:
U.S. Government
Printing Office,
1983.

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A NATION AT RISK

David Pierpont Gardner, Chairman

Recommendation A: Content

We recommend that State and local high school graduation requirements be strengthened and that, at a minimum, all students seeking a diploma be required to lay the foundations in the Five New Basics by taking the following curriculum during their 4 years of high school: (a) 4 years of English; (b) 3 years of mathematics; (c) 3 years of science; (d) 3 years of social studies; and (e) one-half year of computer science. For the college-bound, 2 years of foreign language in high school are strongly recommended in addition to those taken earlier.

Recommendation B: Standards and Expectations

We recommend that schools, colleges, and universities adopt more rigorous and measurable standards, and higher expectations, for academic performance and student conduct, and that 4-year colleges and universities raise their requirements for admission. This will help students do their best educationally with challenging materials in an environment that supports learning and authentic accomplishment.

Recommendation C: Time

We recommend that significantly more time be devoted to learning the New Basic. This will require more effective use of the existing school day, a longer school day, or a lengthened school year.

Recommendation D: Teaching

This recommendation consists of seven parts. Each is intended to improve the preparation of teachers or to make teaching a more rewarding and respected profession. Each of the seven stands on its own and should not be considered solely as an implementing recommendation.

Recommendation E: Leadership and Fiscal Support

We recommend that citizens across the Nation hold educators and elected officials responsible for providing the leadership necessary to achieve these reforms, and that citizens provide the fiscal support and stability required to bring about the reforms we propose.

To summarize the education consequences of demographic changes:

1. More children entering school from poverty households.
2. More children entering school from single-parent households.
3. More children from minority backgrounds.
4. A smaller percentage of children who have had Head Start and similar programs, even though more are eligible.
5. A larger number of children who were premature babies, leading to more learning difficulties in school.
6. More children whose parents were not married, now 12 of every 100 births.
7. More "latch-key" children and children from "blended" families as a result of remarriage of one original parent.
8. More children from teen-age mothers.
9. Fewer white, middle-class, suburban children, with day care (once the province of the poor) becoming a middle class norm as well, as more women enter the work force.
10. A continuing decline in the level of retention to high school graduation in virtually all states, except for minorities.
11. A continued drop in the number of minority high school graduates who apply for college.
12. A continued drop in the number of high school graduates, concentrated most heavily in the Northeast.
13. A continuing increase in the number of Black middle class students in the entire system.
14. Increased numbers of Asian-American students, but with more from Indonesia, and with increasing language difficulties.
15. Continuing high drop-outs among Hispanics, currently about 40% of whom complete high school.
16. A decline in the number of college graduates who pursue graduate studies in arts and sciences.
17. A major increase in part-time college students, and a decline of about 1 million in full time students. (Of our 12 million students, only about 2 million are full time, in residence, and 18-22 years of age.)
18. A major increase in college students who need BOTH financial and academic assistance. A great liaison between the offices of student financial aid and counseling will be essential.
19. A continuing increase in the number of college graduates who will get a job which requires no college degree. (Currently 20% of all college graduates.)
20. Continued increases in graduate enrollments in business, increased undergraduate enrollments in arts and sciences COURSES but not majors.
21. Increasing numbers of talented minority youth choosing the military as their educational route, both due to cost and direct access to "high technology."
22. Major increases in adult and continuing education outside of college and university settings—by business, by government, by other nonprofits such as United Way, and by for-profit "franchise" groups such as Bell and Howell Schools and The Learning Annex.
23. Increased percentage of workers with a college degree. (From one in seven to one in four today.)

Hodgkinson, Harold L. All One System. Washington, D.C.: The Institute for Educational Leadership, Inc., 1985.

EMERGENCE OF VOCATIONAL, TECHNICAL, OCCUPATIONAL EDUCATION IN AMERICA

INTELLECTUAL CAPITAL FORMATION

By

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REVIEW OF LITERATURE

McGregor (1991) defines intellectual capital as the knowledge, abilities, and skills that are stored in people; this is one of three developments necessitating changes in workforce management. Coates (1990), McGregor (1991), Taylor (1991), and the booklet Investing In People (1989) agree that people and the knowledge they possess are the most important resource in the information society. Each company/business will have to develop human resource management techniques if the company and the nation are to survive in the global economy. Coates (1990) and McGregor (1991) agree that changes in the overall workforce structure will have to be made; new methods will be developed with regard to how people are recruited, managed, fired, trained, and retained. Human resource management is no longer confined to former personnel office techniques; human resource management will become a strategic management concept throughout the nation's businesses (Parnell, 1990).

There seem to be seven forces which are reshaping work and the workforce: (1) increasing diversity, (2) integrating home life and work life, (3) globalization, (4) expanding human resource planning, (5) changing nature of work, (6) rising employee expectations, and (7) renewing society's agenda (Coates, 1990). All of these forces will have a great impact on the corporate/business budget.

Increasing diversity in the workforce is presenting many challenges to human resource planning. According to the OERI

Bulletin (1991) diversity is driven to a great extent by the demographic changes taking place; for example, more women, minorities, and immigrants are entering the workforce; at the same time, the work force is aging and fewer young people are available to fill entry-level positions (Johnston, 1987; Levine, 1989; and Parnell, 1990).

The move to the information-based society is also creating changes in the structure of the family; they are either two-income or single-parent families. Family structure is now affecting work life as parents must make arrangements for children; there has been a tremendous increase in the number of day care centers and workers seeking jobs which are part-time with flexible hours (Auerbach, 1988; Davidson, 1990; and Lombardi, 1990). This also provides incentive for the cottage industry. Human resource development will become involved in helping workers as individuals and as family members. Employers in the information society must be interested in their employees' values and attitudes since each employee will have more responsibility for his own actions. According to Etzioni (1988) society is becoming an "I and We" integration--individuals with a self-centered "I" have to function as part of the broad, collective social "We"--which creates a wide variety of behaviors.

As the global economy becomes more important, all nations of the world are forced to be interdependent (Buzzell, 1990; Coates, 1990; Kiplinger, 1989; and Investing In People, 1989). Trade agreements and national partnerships will cross boundaries and cause many shifts in markets and capital.

Human resource management must remain alert to changing world conditions and the overall effects these shifts will have on the marketplace.

The global economy puts a new emphasis on the worker as an asset to be managed, thus the necessity to integrate human resource planning with the company's strategic plan (Madron, 1991; McGregor, 1991; and Parnell, 1990). The role of the human resource specialist or professional will be greatly expanded; this individual will have to cope with workers of all ages, consult with top management, and serve as an in-house demographer, career/life planning advisor, and cultural anthropologist. The technologies of the information society are changing the nature of work; there is a need for constant training and reeducating in the knowledge-based work force (Cetron, 1989; Parnell, 1990; Pautler, 1990; and Smith 1990). Since most training and reeducating are performed by the company itself, the human resource professional will be running a small college within the company.

The information society seems to be forcing lifestyles and work indoors. This results in a sedentary population and accounts for some of the rising health care costs--in both individual and occupational safety/health issues (Coates, 1990, and Kiplinger, 1989).

Since the business world is part of society at large, corporations will have to become more active in social issues. Workforce developments relate directly and indirectly to social, political, technological, biological, economic, scientific, ecological and international topics.

Coates (1990) says the point of studying the future is to build that knowledge into today and tomorrow's actions. Unfortunately, according to Investing In People (1989) there are no simple, easy solutions to produce significant improvements in workforce quality.

The question seems to be what part can education, specifically vocational education, perform in developing a workforce that is knowledgeable and skilled to keep America functioning in the global economy. Most citizens would agree that education is not doing the job, but they would also agree that education is the hope of the future.

The terms vocational, career, and technical education can be used interchangeably because all are concerned with making the nation strong and productive. The purpose of vocational education is to provide students with useful skills; in addition, vocational education teachers reinforce information taught in English, math, science, etc. (Pautler, 1990).

Today, vocational education has an image problem. Parents and educators view vocational education as the dumping ground; vocational educators must work to improve the overall image (Parnell, 1990). Vocational educators need to document their successes and failures and collect and maintain statistics on this documentation (Smith, 1990, and Scriven, 1991). The Perkins Vocational Education Act of 1984 was beneficial, however, it reduced the requirements for collecting and reporting data (Pautler, 1990).

In 1990 both the Senate and House passed a reauthorization of the Perkins bill; Congress authorized the spending of

$1.5 billion in 1991. A significant change in the bill was the requirement that at least five percent of the funds be spent on programs that link the last two years of high school with community/technical college programs (Smith, 1990).

In 1985, Dale Parnell presented a tech/prep program which combines the last two years of high school with two years of technical training at a community college. In 1989, Cetron emphasized the need for students to receive additional training; he strongly supported all vocational education programs and emphasized the tech/prep concept.

A great deal has also been done in the area of business-education partnerships. Briggaman (1991), Naisbitt (1985), and Vesper (1990) feel that this is a win-win relationship which will continue well into the twenty-first century since it provides resources for educators, the benefit of real-world experience for students, and a future workforce that is competitive.

Most writers generalize when discussing the future. The terms vision and strategic planning are used; however, very few, if any, provide an in-depth presentation of specifics--no one evaluates and presents a plan of action. The bottom line is that education is the responsibility of teachers, students, parents, librarians, administrators, policymakers, the media, and the business community (Buzzell, 1990; Cetron, 1985; Kiplinger, 1989; Levine, 1989; and Ravitch, 1987). The unanswered question: can all of these people agree--in time to save the next generation of American youth.

IMPLICATIONS

The majority of educational documents, whether government sponsored or generated by concerned citizens, stress the importance of teacher preparation. Teacher preparation for the future, which begins today, must include the traditional specialization preparation and units on educational history and leadership. Future teachers must be aware of the successes and failures of the past in order to secure a bright future. Future teachers must be taught to be leaders--they must know how to teach, do research, be politically aware, and know how to listen. The theme 2020 for Educational Leaders will cover several areas: business administration, curriculum and program planning, research, societal factors, computers and technology, and futuring/visioning.

Business administration for all teachers will provide an understanding of the management of an institution. Teachers will be given the opportunity to envision the institution from the perspective of the president and the housekeeping staff. This will provide an understanding of the culture of the organization and provide a realistic framework from which ideas and plans can be made.

Future curriculum and planning must reflect recognized, measured educational goals as well as the current needs of society. Curriculum and planning will be subjected to the same changes taking place in all aspects of society. Technology will continue to impact program planning. Since change is constant, educators will teach a core of basic information to all students as they move through the educational pipeline. A large part of future program planning must include awareness of students with special problems. Much work needs to be done in the area of diagnosis of childhood problems--from dyslexia to abuse. The learning ability/environment of a child is a combination of many forces--school, home, and the media, etc. While each child will be respected as an individual (equality), greater emphasis will be placed on the progress of each child to reach his/her maximum potential (quality).

To accomplish both equality and quality, educators will have to maintain documentation on effective versus ineffective methods and techniques in relation to differing learning styles. The student(s) must always be the teacher's number one priority; however, teachers must be taught to remain alert to what works and what does not work with different types of students. Once the teachers are performing research, each state should develop a repository for the data. Data collected from and shared by many sources becomes useful and beneficial to the nation.

If teachers use computers and technology, the job of research and program planning will be simplified. Technology must be viewed as an instructional assistant. It provides teachers with the opportunity to work with an entire class on an individual basis, and it generates thousands of learning opportunities in the classroom and in the real world. By the turn of the century, telecommunications should be available in all educational institutions. The opportunities for teaching and learning are endless--telecommunications create a classroom with no walls for both the students and the faculty. Information can be accessed and distributed to any location in the world; it provides an encyclopedia at your fingertips.

Future educators would be remiss if they did not review the societal factors affecting their existence. While demographics are good indicators, they are not the only instrument by which society is reviewed. Educators of the future must observe and never lose sight of the broad picture; education is but one part, albeit an important part, of the global village.

Training teachers to be futurists will be a difficult task. Everyone has a dream or vision of the future--the way we would like it to be. However, creating a vision means looking at your particular specialty and also looking at the broad picture--a vision of the future must combine selected interests with all-purpose interests. To do this, a person must be skilled in strategic planning--understanding the purpose of education and developing a good fit between educational activities and the demands of surrounding environments.

Teachers of the future will be trained in a particular discipline and taught to respect that discipline and work for its improvement. At the same time, teachers will also be cross trained so that a healthy respect for all disciplines is developed. Teachers of the future will need to understand human development from birth to death since people will be lifetime learners.

The image of the electronic college and the school of the future conjures up a different picture in each person's mind.

It seems that the school of tomorrow must develop a core curriculum--most of the historical documents that affect education have shared several basic ideas: school should reflect the needs of society, concern for one's well being, basic skills (reading, writing, and arithmetic), and training for productive living. In addition, each document seems to reflect a current social movement--national defense in the 50s, equality issue in the 60s, transition from industrial to information society in the 80s.

Although a national curriculum is prohibited in the US constitution, the governors conference on education may hold the greatest promise for some type of interstate educational reform. Unfortunately, haste has made waste in education over the last ten to twenty years. True educational reform will take a long time to achieve. Today's society is a throw-away society. Education has become a victim of itself; it was unable to fulfill its mission to train all children equally. Children need stability in family life and in education. Adults will need a similar stability as they become lifetime learners.

The school of future will need three plans: one for the average, the exceptional, and the below average student. Each plan will be based upon the student's IQ and distinctive learning' behaviors and abilities. A great deal of research needs to be done to understand learning behaviors and styles. Once the student's preferred learning style(s) is identified, the student should enjoy learning and become self-motivated to continue learning.

All three plans should teach the student to read, write, and compute and respect other human beings regardless of their IQ or physical appearance. The issue of personal health will be extremely important in the school of the future. In fact, the issue of health will, by social demand, become an important factor in the basic core curriculum.

The school of the future, like the school of today, will be shaped by people--some motivated by care and concern, others motivated by greed and self-interests. The schools of the future must improve the methods by which children learn, be responsive to student's individual learning styles, and maintain high standards (standards which motivate students at all levels to reach beyond their accomplishments). As children progress through elementary school, they should be exposed to various occupations and provided with the opportunity to talk with workers from all segments of the workforce. Longer school days and longer school years will provide the time to develop the academic/technical skills of all students.

Academic and vocational teachers will work side by side. Both will have to be trained to understand students, the future needs of the workforce and the changing needs of the workplace. This will be possible because business support of education will increase to the point that teachers and business people form mutual goals for the graduates of 2020 and beyond.

REFERENCES

Auerbach, Judith D. In the Business of Child Care. New York, New York: Praeger Publishers, 1988.

Briggaman, Joan S. "Recruitment program builds win-win relationships." The Balance Sheet. 72, No. 3, 1991.

Buzzell, Charles H. "Coming to grips with accountability." The Balance Sheet. 72, No. 1, 1990.

Cetron, Marvin. Schools of the Future. New York, New York: McGraw-Hill Book Company, 1985.

Cetron, Marvin and Owen Davies. American Renaissance. New York, New York: St. Martin's Press, 1989.

Coates, Joseph F., Jennifer Jarratt, and John B. Mahaffie. Future Work. San Francisco, California: Jossey-Bass Publishers, 1990.

Commission on Workforce Quality and Labor Market Efficiency. Investing in People. Washington, D.C.: Department of Labor, 1989.

Davidson, Dana H. "Child care as a support for families with special needs." Young Children. 45, No. 3, 1990.

Etzioni, Amitai. The Moral Dimension. New York, New York: The Free Press, 1988.

Johnston, William B. and Arnold H. Packer. Workforce 2000. Indianapolis, Indiana: Hudson Institute, Inc., 1987.

Kiplinger, Austin H. and Knight A. Kiplinger. America in the Global '90s. Washington, D.C.: The Kiplinger Washington Editors, Inc., 1989.

Levine, Arthur. Shaping Higher Education's Future. San Francisco, California: Jossey-Bass Publishers, 1989.

Lombardi, Joan. "Head start: the nation's pride, a nation's challenge." Young Children. 45, No. 6, 1990.

Madron, Thomas W. "Enterprise computing in higher education." Technological Horizons in Education. 18, No. 11, 1991.

McGregor, Eugene B., Jr. Strategic Management of Human Knowledge, Skills, and Abilities. San Francisco, California: Jossey-Bass Publishers, 1991.

Naisbitt, John and Patricia Aburdene. Re-inventing the Corporation. New York, New York: Warner Books, Inc., 1985.

National Business Education Association. "Highlights of the Perkins Act of 1990." Keying In. 1, No. 1, 1991.

Parnell, Dale. Dateline 2000. Washington, D.C.: The Community College Press, 1990.

Parnell, Dale. "Why applied academics?" The Balance Sheet. 72, No. 1, 1990.

Pautler, Albert J., Jr. Vocational Education in the 1990s: Major Issues. Ann Arbor, Michigan: Prakken Publications, Inc., 1990.

Ravitch, Diane and Chester E. Finn, Jr. What Do Our 17-Year-Olds Know? New York, New York: Harper & Row, Publishers, 1987.

Scriven, Jolene D. "Needed research in business education." Business Education Forum. 45, No. 5, 1991.

Smith, C. LeMoyne. "Speaking out for our future." The Balance Sheet. 72, No. 1, 1990.

Taylor, Lillie. "Involving the business community in improving education." Business Education Forum. 45, No. 8, 1991.

United State Department of Education. "Report tracks school trends into 21st century." OERI Bulletin. Spring 1991.

Vesper, Carolyn. "Education is everybody's business." The Balance Sheet. 72, No. 2, 1990.

EMERGENCE OF VOCATIONAL, TECHNICAL, OCCUPATIONAL EDUCATION IN AMERICA

RELEVANT VTO MATERIALS

By

Polly A. Schultz

Villa Julie College

Warren H. Groff, Ed.D.

Summer Institute

A seminar paper presented to Nova University in partial fulfillment of the requirements for the degree of Doctor of Education

Nova University

July 8, 1991

BIBLIOGRAPHY

_____ A Nation at Risk. Washington, D.C.: U.S. Government Printing Office, 1983.

Arneson, Patricia Marie. The Impact of Changing Office Technology on Employment in the Office Occupations: A Nationwide Survey of Temporary Help Firms to Determine Job Skills and Training of Office Automation Workers. Dissertation Abstracts, Vol. 50, 1989.

Auerbach, Judith D. In the Business of Child Care. New York, New York: Praeger Publishers, 1988.

Bailey, Stephen K. ESEA The Office of Education Administers a Law. Syracuse, New York: Syracuse University Press, 1968.

Barnhardt, Carol. Let Your Fingers do the Talking: Computer Communication in an Alaskan Rural School. ERIC Ed 241 242, 1984.

Bell, Daniel. The Reforming of General Education. New York, New York: Columbia University Press, 1966.

Bell, Daniel. Toward the Year 2000: Work in Progress. Boston, Massachusetts: Beacon Press, 1968.

Bennis, Warren. Why Leaders Can't Lead. San Francisco, California: Jossey-Bass Publishers, 1989.

Black, Theodore M. Straight Talk about American Education. New York, New York: Harcourt Brace Jovanovich, Publishers, 1982.

Block, Peter. The Empowered Manager. San Francisco, California: Jossey-Bass Publishers, 1987.

Bloom, Benjamin S. All Our Children Learning. New York, New York: McGraw-Hill Book Company, 1981.

Bowsher, Jack E. Educating America. New York, New York: John Wiley & Sons, Inc., 1989.

Brandwein, Paul F. Memorandum: On Renewing Schooling and Education. New York, New York: Harcourt Brace Jovanovich, Publishers, 1981.

Briggaman, Joan S. "Recruitment program builds win-win relationships." The Balance Sheet. 72, No. 3, 1991.

Brown, B. Frank, ed. The Reform of Secondary Education. New York, New York: McGraw-Hill Book Company, 1973.

Burtless, Gary, ed. A Future of Lousy Jobs? Washington, D.C.: The Brookings Institution, 1990.

Buzzell, Charles H. "Coming to grips with accountability." The Balance Sheet. 72, No. 1, 1990.

Carnevale, Anthony P., Leila J. Gainer, and Eric R. Schulz. Training the Technical Work Force. San Francisco, California: Jossey-Bass Publishers, 1990.

Carnevale, Anthony P., Leila J. Gainer, and Janice Villet. Training in America. San Francisco, California: Jossey-Bass Publishers, 1990.

Cetron, Marvin. Schools of the Future. New York, New York: McGraw-Hill Book Company, 1985.

Cetron, Marvin and Owen Davies. American Renaissance. New York, New York: St. Martin's Press, 1989.

Cetron, Marvin and Thomas O'Toole. Encounters with the Future: A Forecast of Life into the 21st Century. New York, New York: McGraw-Hill Book Company, 1982.

Coates, Joseph F., Jennifer Jarratt, and John B. Mahaffie. Future Work. San Francisco, California: Jossey-Bass Publishers, 1990.

Cohen, Steven. The Effective Public Manager. San Francisco, California: Jossey-Bass Publishers, 1988.

Commager, Henry Steele. Documents of American History. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973.

Commission on Workforce Quality and Labor Market Efficiency. Investing in People. Washington, D.C.: Department of Labor, 1989.

Conant, James B. The Education of American Teachers. New York, New York: McGraw-Hill Book Company, Inc., 1963.

Conant, James B. The American High School Today. New York, New York: McGraw-Hill Book Company, Inc., 1959.

Conant, James B. Education and Liberty. New York, New York: Vintage Books, a Division of Random House, 1953.

Courtney, Donna Smith and Carolou Skeans. "Facing universal concerns in office problems course." Forum. 44, No. 6, 1990.

Cyert, Richard M. and David C. Mowery, eds. The Impact of Technological Change on Employment and Economic Growth. Cambridge, Massachusetts: Ballinger Publishing Company, 1988.

Davidson, Dana H. "Child care as a support for families with special needs." Young Children. 45, No. 3, 1990.

Davis, Lloyd. UTC Word Processing Services and Center Evaluation and Recommendations. ERIC ED 305 923, 1988.

Drucker, Peter F. The New Realities. New York, New York: Harper & Row, Publishers, 1989.

Etzioni, Amitai. The Moral Dimension. New York, New York: The Free Press, 1988.

_____ Federal Role in Education. Washington, D.C.: Congressional Quarterly Service, 1965.

Finn, Chester E., Jr., Diane Ravitch, and Robert T. Fancher, eds. Against Mediocrity. New York, New York: Holmes and Meier Publishers, Inc., 1984.

Fitz-enz, Jac. Human Value Management. San Francisco, California: Jossey-Bass Publishers, 1990.

Forrer, Stephen E. and Zandy B. Leibowitz. Using Computers in Human Resources. San Francisco, California: Jossey-Bass Publishers, 1991.

Gardner, John W. The Recovery of Confidence. New York, New York: W. W. Norton & Company, Inc., 1970.

Gardner, John W. Self-Renewal. New York, New York: Harper & Row, Publishers, 1963.

Gardner, John W. Excellence. New York, New York: Harper & Brothers, Publishers, 1961.

Goodman, Paul S. and Lee S. Sproull. Technology and Organizations. San Francisco, California: Jossey-Bass Publishers, 1990.

Gregory, Margaret P., ed. Business Education for a Changing World. Reston, Virginia: National Business Education Association, 1987.

Hale, Noreen. The Older Worker. San Francisco, California: Jossey-Bass Publishers, 1990.

Hodgkinson, Harold L. All One System. Washington, D.C.: Institute for Educational Leadership, 1985.

Johnston, William B. and Arnold H. Packer. Workforce 2000. Indianapolis, Indiana: Hudson Institute, Inc., 1987.

Katznelson, Ira and Margaret Weir. Schooling For All. New York, New York: Basic Books, Inc., Publishers, 1985.

Keppel, Francis. The Necessary Revolution in American Education. New York, New York: Harper & Row, Publishers, 1966.

Kiplinger, Austin H. and Knight A. Kiplinger. America in the Global '90s. Washington, D.C.: The Kiplinger Washington Editors, Inc., 1989.

Levine, Arthur. Shaping Higher Education's Future. San Francisco, California: Jossey-Bass Publishers, 1989.

Lombardi, Joan. "Head start: the nation's pride, a nation's challenge." Young Children. 45, No. 6, 1990.

Madron, Thomas W. "Enterprise computing in higher education." Technological Horizons in Education. 18, No. 11, 1991.

Mager, Robert F. and Kenneth M. Beach, Jr. Developing Vocational Instruction. Belmont, California: Fearon Publishers, 1967.

McGregor, Eugene B., Jr. Strategic Management of Human Knowledge, Skills, and Abilities. San Francisco, California: Jossey-Bass Publishers, 1991.

Mensch, Gerhard and Richard J. Niehaus. Work, Organizations, and Technological Change. New York, New York: Plenum Press, 1982.

Naisbitt, John and Patricia Aburdene. Re-inventing the Corporation. New York, New York: Warner Books, Inc., 1985.

Naisbitt, John and Patricia Aburdene. Megatrends 2000. New York, New York: William Morrow and Company, Inc., 1990.

National Business Education Association. "Highlights of the Perkins Act of 1990." Keying In. 1, No. 1, 1991.

Parnell, Dale. Dateline 2000. Washington, D.C.: The Community College Press, 1990.

Parnell, Dale. "Why applied academics?" The Balance Sheet. 72, No. 1, 1990.

Pascarella, Perry and Mark A. Frohman. The Purpose-Driven Organization. San Francisco, California: Jossey-Bass Publishers, 1989.

Pautler, Albert J., Jr., ed. Vocational Education in the 1990s: Major Issues. Ann Arbor, Michigan: Prakken Publications, Inc., 1990.

Perkins, Carl D., Chairman. Needs of Elementary and Secondary Education in the 1980s. Washington, D.C.: U.S. Government Printing Office, 1980.

Ravitch, Diane. *The Troubled Crusade*. New York, New York: Basic Books, Inc., Publishers, 1983.

Ravitch, Diane and Chester E. Finn, Jr. *What Do Our 17-Year-Olds Know?* New York, New York: Harper & Row, Publishers, 1987.

Ryan, Kathleen D. and Daniel K. Oestreich. *Driving Fear Out of the Workplace*. San Francisco, California: Jossey-Bass Publishers, 1991.

Schaefer, William D. *Education Without Compromise*. San Francisco, California: Jossey-Bass Publishers, 1990.

Schein, Edgar H. *Organizational Culture and Leadership*. San Francisco, California: Jossey-Bass Publishers, 1985.

Schmidt, B. June and Carol L. Jennings. *A Chronology of Business Education in the United States*. Reston, Virginia: National Business Education Association, 1990.

Scriven, Jolene D. "Needed research in business education." *Business Education Forum*. 45, No. 5, 1991.

Smith, C. LeMoyne. "Speaking out for our future." *The Balance Sheet*. 72, No. 1, 1990.

Taylor, Alice A. "Basic skills and core competencies." *Asserting and Reasserting Business Education at the Postsecondary Level*. Reston, Virginia: National Business Education Association, 1989.

Taylor, Lillie. "Involving the business community in improving education." *Business Education Forum*. 45, No. 8, 1991.

______ *The Federal Government and Public Education*. Washington, D.C.: American Association of School Administrators, 1965.

Toffler, Alvin. *Learning for Tomorrow*. New York, New York: Random House, 1974.

United State Department of Education. "Report tracks school trends into 21st century." *OERI Bulletin*. Spring 1991.

Venn, Grant. *Man, Education, and Work*. Washington, D.C.: American Council on Education, 1964.

Vesper, Carolyn. "Education is everybody's business." *The Balance Sheet*. 72, No. 2, 1990.

As we move into the 21st century, vocational educators must be alert to changes in society, human resource development, technology, and education.

SIGNIFICANT CONCEPTS	IMPLICATIONS
Society. The population will consists of older people (greying of America), one-third of the nation will be a minority by 2000, and the majority of the jobs will be service related. Society will reflect a multi-cultural dimension. All of these will affect and shape the social relationships of the future. These changes will affect politics, the economy, ecology, and scientific and international relations. Interdependency in all segments of life will become significant.	The changes in society will have great impact on the economic structure of the nation. Fewer people will be paying in to social security; new jobs will be in the traditionally low-paying service sector; traditionally underprepared (minority) students will have an opportunity for better jobs if they receive educational preparation. Minorities may gain political clout in some areas. Society, the nation, will have to work together to maintain a competitive edge in the global marketplace; this will necessitate cultural understanding and learning for everyone in the nation.
Human Resource Development. Intellectual capital--the knowledge, skills and abilities that people possess--will be the main thrust in a global economy. The worker is an asset/resource in the information-based society. Thus, the employer will be responsive to all needs in all aspects of the employee's life--family, social, educational, ecological, etc. The corporation/business will establish some form of education training/updating. Health issues will also be important to both the employer and the employee.	Each individual is important because of the knowledge he possesses; however, all individuals will have to function under the team approach to achieve economic success. To maintain worker productivity, business will have to provide support and counseling to workers--in both personal and business-related areas. Business may develop child care facilities at the worksite, substance abuse programs, continuing educational facilities, and physical fitness programs. Business will support education--through partnerships, apprenticeship programs, advisory committees, and by providing employees released time to teach classes in the secondary and college settings.
Technology. One certain fact: technology will continue to change. Computers and telecommunications equipment will be more powerful; software and artificial intelligence will be developed and used in all phases of life. Technology will become a teaching assistant in all classrooms.	Literacy skills will be of paramount importance. Everyone must be able to use a computer, read and understand the documentation, and perform basic computer maintenance. The workforce is the intellectual capital in the information society; there will an increased need for scientific personnel, technicians, programmers, and users in all aspects of human existence--from medicine to entertainment. Educators will be expected to teach the ever-changing technologies to traditional students and to the workforce (updating).
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1990s: TRANSITION TO AN ADVANCED TECHNICAL ERA

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

DEMOGRAPHIC:
majority of Americans are getting older
increase in number of minorities (cultural diversity)
women/minority in management positions
shrinking labor pool

* Demographic factors affecting my employer:
increase in number of minority students
shrinking pool of traditional age college students
lower test scores nationwide (i.e. SAT)

SOCIAL:
integration of homelife and work life
health issues/concerns
human resource development
unconventional work arrangements
nationwide mobility
work and education influence women's childbearing choices
education and training--
  cost increase
  new skills will be needed--new educational demands
  business/education partnerships increase
ethics--in business and life will become an issue
concern for environment

* Social/educational factors affecting my employer:
cost of health care
balance of part-time and full-time teachers
environmental concerns vs. need to expand physical facilities
provision for social activities on commuter campus
student's part-time work schedule vs. course load
lack of elementary and secondary preparation impacts on each class taught on campus; one educational level builds upon the other
maintain reputation for excellence in Baltimore community (amidst great change and challenge of future)

ECONOMIC:
globalization
corporate mergers and acquisitions
worldwide technical and scientific competence will create competition
workforce restructuring--industrial to service economy affects compensation
new style of corporate leadership and management
decrease in power of unions
trade agreements affects economic structure
new marketing techniques developed

* Economic factors affecting my employer:
current recession--how long will it last; after effects
cost of equipment and software

greying of the faculty
mass transportation in Baltimore area
capital campaign plan
depreciation of existing facilities (i.e. asbestos removal, deterioration, etc.)
state budget deficit
need to increase endowment fund
need to increase scholarship funds for all needy students

TECHNOLOGICAL:

miniaturization of electronics
superconductors and advanced semiconductors
communication and information technologies, Fax, computers
fiber optics
optics
high-definition TV
biotechnology
chromosome mapping
pharmaceuticals
body parts - mechanical and animal
aeronautics
energy - solar, wind, ocean/sea

* Technological factors affecting my employer:

inventory--may use bar code system
library - database, CD-ROM
campus-wide network with fiber optic connection
phone access (modem) by faculty, administrators, and students to computer network
cost of equipment and software
need to expand existing telecommunications facilities; plan to build a new building for all computer-related programs

GOVERNMENTAL PLANNING/POLITICAL factors affecting my employer:

capital campaign requires state funding
need local (County) approval of building plans (campus must connect to City system or build a treatment plant)
decrease in Federal funds will affect the college (proposed plans, existing programs, and student financial aid)

VALUES

cultural diversity brings overwhelming new potential and/or racial tensions--depending upon the social and economic factors affecting the geographic area
decrease in student values and ethics/morality
business concern that employees be responsible and honest
multi-cultural society brings differing values which are inherited, not learned; can America continue to be a "melting pot"; recent immigrants want to maintain their cultural identity.

* Values decisions affecting my employer:

increase in racial incidents
campus security
teaching business ethics (majority of programs are business related)

EMERGENCE OF VOCATIONAL, TECHNICAL, OCCUPATIONAL EDUCATION IN AMERICA

INTRAPRENEURSHIP IN POSTSECONDARY EDUCATION

Synthesis Paper

by

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Warren H. Groff, Ed.D.

Summer Institute

A seminar paper presented to Nova University in
partial fulfillment of the requirements for the
degree of Doctor of Education

Nova University

August 14, 1991

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INTRODUCTION

In late May of this year, a contract of study for the Vocational, Technical, and Occupational (summer specialization) seminar was signed. The following units were studied:

Unit III Redesign of the Education System
Unit IV The Emergence of the Technical Society
Unit VI Studies about Education
Unit VII Intellectual Capital Formation

An analysis of the four units is presented on page two (see Analysis I). The first three units were required and presented background/historical information on general education and the Emergence of Vocational, Technical, Occupational Education in America. The reviews of literature indicated both the historical development of the current educational system and a variety of options with regard to the future. Inherent in the educational system are the needs of society, human resource development, and technology; the challenge is to combine these forces to make the educational system of today and tomorrow efficient and effective. Unit VII was chosen as an elective unit because intellectual capital formation was an unknown term. However, the unit description was interesting--"to redesign the educational and training delivery system so that it is user controlled" (Groff, 1991). Intellectual capital formation is very closely

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linked to human resource development. The information based society requires that workers possess high-level knowledge, skills and abilities; as technology changes, the workforce will also have to be prepared to retrain. The educational system in the information era must train students to solve problems, accept and deal with change, and accept lifelong learning. All of the units provided relevant facts for educators in any setting; as businesses move into the information era, both the employer and the employee will have to utilize the team approach to survive in the global market structure.

The original contract indicated a need to investigate the interrelationship among elementary, secondary, and college teaching. Since one level builds on the other, there should be a sharing of ideas, research, and results. In particular, the combining of academic and vocational skills to provide the workplace with qualified employees. The relationship of vocational and academic training as it applies to business education was of particular interest and value. The study of the four units provided a foundation for additional study at the summer institute.

ANALYSIS II

All sessions attended during the summer institute related to the major theme of the conference: Intrapreneurship in Postsecondary Education. The non-specialization seminars enhanced the concepts discovered while studying the four units in June/July and also introduced new ideas which could be incorporated with previous knowledge.

The following session-by-session analysis of the summer institute relates the major concept(s) and implication(s) of each speaker.

Monday, July 29, 8:45 to 10 a.m.--General Session
"Intrapreneurship in Postsecondary Education";
Session #001; Speaker: Gifford Pinchot, III

The speaker emphasized the tremendous effect that change from within an organization can have on the overall organization and the importance of each human being. Each person has potential and limitations; business and education must understand what motivates people and tap that wealth of human spirit as we move into the information society.

Monday, July 29, 10:30 to Noon--Keynote Follow-Up Sessions
Session #008; Leader: Warren Groff

A list of sixteen significant concepts was devised. Of the sixteen, sharing the glory and individual/team spirit were the most significant (see Appendix A).

It is important to remember that you manage things and lead people. If business and education accept and analyze mistakes and successes, the future will be improved for each generation.

Monday, July 29, 1:30 to 2:30 p.m.--Institute Theme Sessions
"A Workshop for the Creative Who Desire to Innovate";
Session #013; Speaker: Donald J. Welsh

The significant concepts include institutional climate, vanishing work ethic, and the need for cooperation between management and innovators. The implications include the need to understand organizational development/behavior, motivation techniques and development of both personnel (human resource) and policy within the organization.

Monday, July 29, 2:45 to 3:45 p.m.
"The Impact of Technology on Leadership
Session #024; Speaker: Albert Haugerud (Session change from printed agenda--formerly Albert Pautler)

Technology was presented as a powerbase and the reason for social change; the speaker emphasized that technology is only in its infancy. The ability to interact with computers will be a necessary skill for all employees in the information society. Thus, technology may widen the gulf between the haves and have nots because the poor do not have the opportunity or money to learn/use technology.

Monday, July 29, 3:00 to 4:00 p.m.
"Intrapreneuring: Championing Total Quality Management at Your Institution"; Session #033; Speaker: Richard L. Fairley

Dr. Fairley emphasized total quality management (strategic planning), seeking continuous improvement, and that people who perform the work know it best (human resource).

The implications include a quality first theme; thus education and business must increase educational opportunities in both the workplace and educational institutions. Human resource development is part of lifetime learning; for example, quality is 90% attitude and 10% knowledge.

Tuesday, July 30, 10:30 to Noon--Structured Roundtable Sessions; "The Role of Postsecondary Education in Workplace Literacy"; Session #044; Leader: Grady M. Grizzle

The main points included workplace literacy skills, retraining throughout career, and graying of America. As a result, Fortune 500 companies are conducting literacy classes for employees and corporations are running mini-colleges within the organization. Models of successful programs need to be developed and made available to all.

Tuesday, July 30, 1:30 to 2:30 p.m.--Program-Related Sessions "How to Build a Better Mousetrap: A Guide to the Development Problem-Solving Methodology"; Session #050; Speaker: Grady M. Grizzle

Development methodology is a description of "how" something was developed, is based on more than the researcher's opinions, and is a four step process. No one person possesses all the expertise to develop a product; thus product development brings together opinions from many different sources in order to produce an outstanding product.

Tuesday, July 30, 2:45 to 3:45 p.m.
"The Secrets of Optimizing Your Questionnaire Development and Administration Skills" Session #055; Speaker: Donald Busche

When developing a questionnaire: know what information is needed, code the questionnaires, either obtain facts or opinions, and be sure it is reliable and valid. The questionnaire should move from general to specific data with important questions listed first. Questionnaire design is important since you want a good response. This session will be helpful if I design a questionnaire as part of my MARP.

Tuesday, July 30, 2:45 to 3:45 p.m.
"Nova's Information Retrieval Service: Providing Research Assistance"; Session #057; Speaker: Beth Poliner

Helpful information regarding the use of ERIC, dissertation abstracts, and the outline of a thinking process when preparing to do a search were presented. Concept of using your research paper title to clarify your search procedures/process was explained.

Thursday, August 1, 10:00 to 11:00 a.m.--Practitioners' Hall of Fame 1; "The Exton Corporate Center of West Chester University -- A Link to the Corporate Community";
Session #064; Speaker: Eugene J. Kray

The stages of adult development dictate the needs of the university college located in the middle of an industrial park. Important point is the assessment of demand versus need.

Workers realize the need to retrain and further their education. If educators provide work site opportunities, workforce will participate. Exton project is a money maker; director uses profits to make the program better.

Thursday, August 1, 11:15 to 12:15 p.m.
"Institute for Management and Professional Development: A Public/Private Sector Partnership that Works";
Session #071; Speaker: Mary Lou Webb

Organization and marketing make this college credit/ contracted site training program successful. Emphasized evaluation of every session and follow-up evaluation two months later. The program indicates the need for workplace literacy and retraining. Evaluation and communication are essential if partnerships are going to work.

Thursday, August 1, 1:30 to 2:30 p.m.
"Intrapreneurship in the Era of Smart Homes, Wired Communities, Fast Systems, Global Networks, and Fast Forward Learners in a Borderless World"; Session #075;
Speaker: Warren H. Groff

Important educational concerns: rethinking, restructuring, and revitalizing. Educators must provide leadership and strategic visions now and in the future. Education is now consumer centered.

Education must change to meet the needs of society; i.e. alternative forms of delivery, new instructional methods, and interdisciplinary training for teachers. Human resource development is essential.

Thursday, August 1, 2:45 to 3:45 p.m.
"Intrapreneurship in Higher Education: A Critical Balance"
Session #083; Speaker: Frederick C. Kintzer

Intrapreneurship can be both good and poor. Stressed ethics, morality, and wise use of time in relation to college mission.

The implication is that intrapreneurship can have both positive and negative effects on campus/organization. Educators must be prepared to take the leadership role in matters affecting education or someone else (politicians) will.

Thursday, August 1, 4:00 to 5:00 p.m.
"The Wind Beneath Your Wings: Intrapreneurial Teams in the Community and Technical College"
Session #095; Speaker: Martin B. Parks

Setting up intrapreneurial teams (IT) consists of a 5 step process; should include 6-8 members--background should be interdisciplinary; works best when a dreamer and a doer are included.

The implication is that intrapreneurial teams can provide incentive on campus/organization if members know the team exists for a specific purpose. IT can generate alternative methods, create visions, and generate enthusiasm.

Friday, August 2, 10:15 to 11:45 a.m.
"How Do I Find Relevant Literature on Topics I Know Nothing About, Yet Need, to Complete My Seminars, Practicums, and MARP?" Session #098; Speaker: Thomas H. Quinlan

Key to literature review is identifying the problem. Important to model behavior on work of others. Distributed card of Nova's IRS and concluded a scheduled 1 1/2 hour session at the end of 25 minutes.

Friday, August 2, 1:15 to 2:45 p.m.--Table Presentations
"Exemplary Practicums and MARPs" Session #106

Emphasized that writing practicums and MARP require a great deal of work; however, presenters were all enthusiastic about their respective projects. Unanimous feeling--must love the MARP topic if you are to enjoy the process.

SPECIALIZATION SEMINAR

The specialization seminars also related to the conference theme: Intrapreneurship in Postsecondary Education. The specialization meetings provided the opportunity to develop a plan of action for the future. The plan or vision was meant to be intrapreneurial since all members of the group were interested in or working with the topic on a daily basis. The following outline presents a day-by-day structure of the seminars.

Sunday, July 28, 1:00 to 2:00 p.m.--Specialization Seminar
Overview; Warren Groff
Emergence of Vocational, Technical, and Occupational Education in America

The overview set the stage for our week of study. The significant concepts included program outcomes, systems approach, and study techniques (significant concepts and implications). The opportunity to meet the other participants was worthwhile and enjoyable.

The overall implication was getting to know the other people in the Nova program; it was our first intrapreneurial interaction in E-VTO.

Sunday, July 28, 2:00 to 5:00 p.m.--Specialization Seminar
Meeting; Warren Groff
Emergence of Vocational, Technical, and Occupational Education in America

Synergism is the combination of organizational development (OD) (looking at the internal structure--its reason for being, its culture, and its effectiveness) and human resource development (HRD) (providing the opportunity for each employee to be the best he/she can be).

The overall implication is that the workforce needs the company and the company needs a well-trained workforce; therefore, the employers must provide employees with as many learning opportunities as possible. The combination of OD and HRD is at the very heart of last summer's institute as well as this year's institute.

In the small group discussion, we shared a common interest in business, but our backgrounds and experiences were quite different. All agreed on the topic of "Developing a Plan to Form a Partnership between Business/Industry and Education."

It was obvious that while last year's summer institute centered on strategic planning and human resource development to improve the organization, this year's summer institute centered on the intrapreneurial spirit of the organization--the internal spirit of each employee to want the best for themselves and the organization. To succeed in a global market structure, self, organization, and society must intertwine and share a common goal.

Tuesday, July 30, 8:30 to 10:00 a.m.
Specialization Seminar Meetings;

It is important to know and understand the mission statement of your organization; but in today's fast changing world, it also important to have a vision statement. The vision statement must incorporate organizational development and human resource development (the business and its people).

An organization must identify its problem and then develop a plan to solve it. Establishing a rationale--why is the company doing this--is the first step. Once the problem is identified and a rationale is developed, the organization must set realistic goals (long-range items that state what the organization will do to solve the problem). For each goal, a set of objectives (short-range) must also be developed.

Wednesday, July 31, 8:30 to Noon
Specialization Seminar Meetings

After a brief explanation of the requirements for completion of the E-VTO seminar, the day's activity centered on methodology (the "How" in the process) for solving a problem. Five categories relate to methodology: personnel, technology, interestablishment(interinstitutional), building/ plant, and finance.

A brief review of the history of education and current happenings/visions led into the daily group discussion. Our group was working well together; unfortunately, the group began to be too detailed--it was really a matter of semantics. As time ran out, it was decided that each person would write a set of goals, objectives, and methodology to be shared at the next meeting.

Thursday, August 1, 8:30 to 9:45 a.m.
Specialization Seminar Meeting

Awareness of what is happening in your field or discipline was discussed. Everyone agrees that changes need to be made in education; the educational leadership must answer the question: can a different, or alternative, future be envisioned which will allow education to keep pace with the rapid changes in society/technology. Since education is a state function, it will be up to each state (hopefully, the governors from all 50 states will continue to meet to discuss educational problems) to restructure its own educational system. Items to be restructured: delivery systems, curriculum, instructional methods, and the relationship among all levels of education.

There was no time for a group activity today.

Friday, August 2, 8:30 to 10:00 a.m.
Specialization Seminar Meeting

The evaluation and budget aspects of the planning process were discussed. Dr. Groff pointed out that one problem in education is that no one wants to take responsibility for being a leader, no one wants to process paper, no one wants to plan 5 or 10 years ahead. A thorough review of summer institute requirements was followed by Barry Satterlee's presentation.

The group agreed to meet at 6:30 p.m. to review Saturday's presentation; unfortunately, only 3 of 7 group members showed up for the meeting.

Saturday, August 3, 7:30 to 11:00 a.m.
Specialization Seminar Meeting

The Saturday morning group presentations related to Intrapreneurship in Postsecondary Education. The group activity process was one in which each participant had a vision of how to solve a designated problem. The task was to listen to each person's ideas and share possibilities and alternatives to create a desired future. Some group presentations were very specific and related to a particular problem; others were very broad and general in scope.

The presentation outline reviewed the concepts learned during the specialization seminars--define the problem, establish a rationale, set goals and objectives, determine methodology, and evaluate and forecast budget projections. All presentations were acceptable; however, the outreach-economic development and restructuring groups seemed to be cohesive and very focused in their task.

Both groups centered on improving the individual for the betterment of all. If companies can provide personal development classes (to combat illiteracy, increase the employee's knowledge, improve the employee's skills, or increase cultural diversity awareness) for employees, the company will ultimately create a "win-win" relationship (Briggaman, 1991; Naisbitt, 1985; and Vesper, 1990).

The business group was focused on the development of partnerships, but each member was too focused on the needs of his/her own institution to envision a future of alternative ideas. Appendix B contains the business group's final plan to create partnerships between business/industry and education. Appendix C contains my original plan to create partnerships between business/industry and education.

The specialization seminar summary focused on distance learning, the electronic college, cultural diversity, key terms in macro transition, and alternatives to traditional educational methods. Intrapreneurship is about people--how one person can make a difference. Beyond this, intrapreneurship is about education--each teacher has the opportunity to affect a student; intrapreneurship means change from within, each person's changes from within are a result of that person's beliefs, family, educational experiences, and environment. The future is today and every educator has a great challenge to be an intrapreneur.

SYNTHESIS PAPER

There is a relationship between Analysis I and Analysis II. Using the four topical areas from Analysis I, several points can be reinforced, enhanced, or adjusted when reviewing the summer institute.

Society

Pinchot stated that innovation is rarely a solo activity. In essence, this statement reinforces the concept that today's society is interdependent (Buzzell, 1990; Coates, 1990; and Kiplinger, 1989). Webb also discussed this concept in relation to the global marketplace. The multicultural theme is applicable to both summer institutes (1990 and 1991); many speakers (Groff, Parks, Pinchot, Webb, and Welsh) talked of innovation as the combining of people from varied backgrounds. Societal demographic shifts are obvious--as Americans gets older, they will affect politics, the economy, education, and human resource development (Hodgkinson, 1985).

Human Resource Development (HRD)

An important part of intrapreneurship is intellectual capital--the knowledge, skills, and abilities that people possess (Coates, 1990, and McGregor, 1991). The conference focused on the workplace and how one individual can improve the organization from within. The corporate culture is the result of interaction among the CEO, management, and employees at all levels. The HRD office must meet the needs of all segments of the corporation--from personal to professional. When the employee is viewed as an asset, the employer must become responsive to all needs--this range of needs includes health issues, opportunity for continued education, leadership training, and ethical conduct. Many speakers (Grizzle, Groff, Fairley, Haugerud, Kintzer, Kray and Webb) discussed some aspect of the response to human need. One important item gained from Fairley and Webb was the need to lead, and while leading, to listen to your followers.

Technology

Three speakers (Groff, Haugerud, and Webb) concentrated on technology and technological change. Most speakers mentioned technology as related to their field of endeavor. For example, Beth Poliner discussed the use of advanced database searches to provide assistance to Nova students; Quinlan recommended that Nova students utilize the services of Nova's Information Retrieval Service when writing, especially the MARP project; and Welsh mentioned the impact that technology has on the business world--it affects both policy and personnel change.

Haugerud stated that technology is responsible for all changes taking place in society today. He feels that information technology is the new powerbase for organizational leaders, it is the catalyst for change in society, education, and business; he emphasized that information technology is only in its infancy. However, Haugerud added that the intrapreneurial spirit is an important part of technology. Companies use technology to improve efficiency and increase productivity; however, technology can also be used for unethical purposes. If the employee is made to feel like a viable part of the organization, the intrapreneurial spirit will want the company to succeed; if the employee is closed out of the decision-making process, the intrapreneurial spirit may become a negative force in the company. The bottom line is people--an intrapreneur is one person trying to make a difference, the difference may be positive or negative.

One last and important area related to technology is telecommunications and its relationship to education through distance learning and the electronic college. The emphasis on distance learning and consumer centered education was discussed in several sessions. Educators seem to have several opinions with regard to this topic.

Since technology is tied to all segments of the social structure, it cannot be ignored. As technology changes and moves in certain directions, it will be important for society (the people) to envision the good and bad possibilities related to it.

Education

All educators and most citizens have come to realize that education will be a lifetime experience for most people (Cetron, 1989; Drucker, 1989; Naisbitt, 1982; Parnell, 1990; Pautler, 1990; Smith, 1990; and Toffler, 1970 and 1980). Kray and Webb are involved in programs which promote education for a lifetime as well as establish partnerships between business/industry and education. Just as technology is invading all segments of life, education is being used and/or designed to keep people up to date in an attempt to remain technologically competent. Retraining, restructuring, and revitalizing (Groff) have enhanced the 3R's for both the traditional and adult learner. Society, business, and education are using the technological advances of distance learning to improve the overall quality of life and the opportunity of education for all. Part of the educator's role is to remain responsive to society's needs; distance learning is one way education is meeting its long-term goal.

Since the mid-60s, education has attempted to meet the needs of individual students to achieve maximum potential while maintaining a quality education for students in all social strata. Distance learning, computer assisted instruction, and many software programs have been used in an effort to promote equality and quality. Education needs leaders who are trained to communicate with the community and state governments so that the needs of students do not become subjected to political lobby.

As society and the world move into the information age, educators should create alternatives to the traditional delivery system and teaching methods. Groff, Kray, Parks, and Webb emphasized the need to look beyond the accepted educational packages. As the needs of learners become specialized, Groff and Parks recommend the combining of academic and vocational skills to provide business with employees who can identify and solve problems by using the technology (both equipment and software) available.

CONCLUSION

Pinchot set the stage by emphasizing the great potential contained within all individuals. An educator must believe that each student possesses this potential; education is an excellent example of one human being expressing care and concern for another. In a sense, Pinchot is looking for "Camelot"--the ideal life. Perhaps the ultimate ideal is to realize that human beings are "human", but to never stop striving to reach maximum potential. Intrapreneurship represents a change from within--within the person, the organization, or society.

It seemed difficult for some speakers to relate their topic to intrapreneurship; however, the focus of the conference and of the Nova program is the individual. In the last two years I have learned a great deal about the state of the educational system and the external factors that affect the overall system. I wanted to understand the changes taking place in education, but I am not sure I was ready to be told and shown by Nova faculty that I have a responsibility to do something about it.

In a way the summer institute has brought me full circle. I spent the last two years studying governance and management. curriculum, research, human resource development, societal factors, leadership and intrapreneurship. First, I examined the organization--its mission and management practices, how the curriculum was designed and why, and then how to do research (solve a problem) that would benefit my institution. Last year's institute stressed people and why human resource development is so important at all levels of society. In the fall, societal factors forced me to examine the internal and external factors that were affecting my institution--is the institution aware of the demographic shifts, is it doing something about its own future, is there a strategic plan, does it have a vision. The final seminar, leadership, examined the characteristics and types of leadership styles being used today. Finally, this year's summer institute focused on the person, on me, on my self-contained, maximum potential to bring about change within myself and my institution.

Intrapreneurship can happen within the person, within the organization, and within society. Intrapreneurship is part of the synergism of organizational development and human resource development.

REFERENCES

Briggaman, Joan S. "Recruitment program builds win-win relationships." The Balance Sheet. 72, No. 3, 1991.

Buzzell, Charles H. "Coming to grips with accountability." The Balance Sheet. 72, No. 1, 1990.

Cetron, Marvin. Schools of the Future. New York, New York: McGraw-Hill Book Company, 1985.

Cetron, Marvin and Owen Davies. American Renaissance. New York, New York: St. Martin's Press, 1989.

Coates, Joseph F., Jennifer Jarratt, and John B. Mahaffie. Future Work. San Francisco, California: Jossey-Bass Publishers, 1990.

Drucker, Peter F. The New Realities. New York, New York: Harper & Row, Publishers, 1989.

Hodgkinson, Harold L. All One system. Washington, D.C.: Institute for Educational Leadership, 1985.

Kiplinger, Austin H. and Knight A. Kiplinger. America in the Global '90s. Washington, D.C.: The Kiplinger Washington Editors, Inc., 1989.

McGregor, Eugene B., Jr. Strategic Management of Human Knowledge, Skills, and Abilities. San Francisco, California: Jossey-Bass Publishers, 1991.

Naisbitt, John and Patricia Aburdene. Re-inventing the Corporation. New York, New York: Warner Books, Inc., 1985.

Naisbitt, John. Megatrends. New York, New York: Warner Books, Inc., 1982.

Parnell, Dale. Dateline 2000. Washington, D.C.: The Community College Press, 1990.

Parnell, Dale. "Why applied academics?" The Balance Sheet. 72, No. 1, 1990.

Pautler, Albert J., Jr. Vocational Education in the 1990s: Major Issues. Ann Arbor, Michigan: Prakken Publications, Inc., 1990.

Smith, C. LeMoyne. "Speaking out for our future." The Balance Sheet. 72, No. 1, 1990.

Toffler, Alvin. The Third Wave. New York, New York: William Morrow and Company, Inc., 1980.

Toffler, Alvin. Future Shock. New York, New York: Random House, 1970.

Vesper, Carolyn. "Education is everybody's business." The Balance Sheet. 72, No. 2, 1990.

APPENDIX A

Intrapreneurship in Postsecondary Education

KEYNOTES FOR FOLLOW-UP SESSION

Significant ideas -- Implications (*)

1. Where there's a will there is a way.
* Repackage - Informal

2. How many non-conventional people can you have?
* Creativity impedes, counter productive.

3. Selective on ideas
* Goals, soul searching, define what's significant, team feedback.

4. Try, try again.
* Look at all variables, pursue rational.

5. Never a solo.
* Know planning style, need others input, build dimension.

6. Calculated risk taking.
* Need a plan

7. Interrelationship between, End Product - Change Process.
* Strategic planning. Put all components in place - fine tune in time.

8. Function of committee, including structure.
* Committees used when across line and staff functions. Align committee to goal.

9. Composition of committee.
* Strategic planning should parallel committee structure. Watch out for boss to overrule.

10. Vision strong enough to be tested against.
* Generate list of values, then test against.

11. Rewards system
* Monitor

12. Resistance
* The more resistance, the more resisted.

13. Share the glory.
* Even with resistors

14. No decision is final.
* Never take "no" for answer, keep trying.

15. Intrapreneurs vs heart.
* Ideas come from heart.

16. Cope with failure, learn from mistakes.
* Must learn to do this, will experience.

APPENDIX B

A VISION FOR THE FUTURE: DEVELOPING A PLAN TO FORM A PARTNERSHIP BETWEEN BUSINESS/INDUSTRY AND EDUCATION

RATIONALE

In order to improve the quality of America's workforce, there exists a need to develop a partnership between business/industry and education.

GOAL AND OBJECTIVES

GOAL: THE SYNERGISM OF THE EDUCATIONAL PROCESS AND WORKFORCE NEEDS OF BUSINESS AND INDUSTRY.

GOAL: TO ESTABLISH A COLLABORATIVE EFFORT BETWEEN EDUCATION AND THE EMPLOYMENT COMMUNITY IN PREPARING STUDENTS FOR TODAY'S AND TOMORROW'S WORKPLACE.

Objective 1: Establish an advisory council from the business /industry community.

Methodology:

- a) Personnel: Contact employers, graduates, students, faculty, administrators.
- b) Technology: Request clerical help.
- c) Interestablishment: Gather the support of administration and other faculty. Consult with others working with advisory groups for suggestions.
- d) Building: Reserve a meeting room and time, as well as refreshments.
- e) Finances: Request funds for mailings and refreshments.

Contact local businesses, individual and through organizational meetings to recruit council members.

Establish rapport for use of tech by interns and for early update on new technology and its use.

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survey research/survey instrument

2. Create an internship program

Evaluate current program
Survey colleges and employers regarding quality of student preparedness
Search/review literature
Review existing programs, i.e. tech prep
Inventory needs of education, then cross reference with

APPENDIX C

A VISION FOR THE FUTURE: DEVELOPMENT OF A PLAN TO FORM A PARTNERSHIP BETWEEN BUSINESS/INDUSTRY AND EDUCATION

Rationale

To improve the quality of America's workforce, a plan must be created to improve and expand the partnership between business/industry and education. Since one out of five adults is functionally illiterate and the nation's jobs require employees with advanced technical skills, the business/industrial community must join forces with the educational system to improve adult skills as well as promote needed skills in current students.

Goals

1. Students prepared for today and tomorrow's entry-level positions--whether in college, vocational or general program.
2. Employer input and financial support of the educational process.
3. The synergism of the educational process and workforce needs of business and industry.

Objectives

1. To prepare students for college
   To prepare students for entry-level positions
   To prepare students for lifelong learning.
2. To establish scholarship funds
   To establish (expand) internship/cooperative programs
   To establish advisory council--re workplace needs
   To establish resource council--financial input
3. To update/retrain the workforce
   To combine forces of corporate training and education
   To provide career counseling to workforce and students.

Methodology

1. Evaluate the current program
   Survey college and employers regarding quality of student preparedness.
   Search the literature
   Review existing programs i.e. tech prep
   Evaluate all data and implement change

2. Establish a HRD resource person to serve as liaison between business and education.
   Inventory needs of education.
   Survey employers
   Cross reference educational inventory with employer survey results.
   Develop strategic plan for our institution
   Present plan to business/community--appointment, Rotary, Chamber of Commerce, etc.
   Track successes and failures over 5 year period
   Evaluate and re-evaluate

3. Coordinate business/corporate changes--use HRD resource person
   Designate faculty to work in designated corporate division
   Establish monthly roundtable discussion between corporate trainers and faculty/workplace members.
   Develop reciprocal career counselors--
      for education share success with business/parents
      for business share expectations with students
   Develop continuing education (credit and non-credit) courses to supplement corporate training
   Develop teams composed of people from all segments of business/industry and education to discuss--
      cultural diversity
      human values
      interdependence
      global competition

3709 Beckleysville Road
Millers, MD 21107
August 18, 1991

Dr. Warren H. Groff
1531 Peabody Avenue
Memphis, TN 38104

Dear Dr. Groff:

When we talked on the phone, I was working on my fourth practicum report. I completed a draft of the report on July 24. At the summer institute I received a revised copy of the form and style guidelines. Needless to say, I have been reformatting the fourth practicum report.

The Nova program is very time consuming, but the program is excellent and very informative. I have learned so much in the last two years. Meeting and working with you has been a pleasure. Your enthusiasm and high energy level are contagious.

Your phone call asking permission to use the papers I prepared for the summer institute was quite a surprise. If you feel my work will benefit others, I am delighted to grant you permission to photocopy any of the papers for use in the PHE program. You also have my permission to pursue the possibility of an ERIC submission.

I have enclosed the original copy of the contract signed in early June. If you need anything else, please do not hesitate to call.

Sincerely,

Polly

Polly Schultz
(301) 374-6719